The emerging professional: exploring student teachers' developing conceptions of the relationship between theory and practice in learning to teach.

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Doctor of Education

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Glossary of abbreviations used in the study

BERA British Educational Research Association

CPD Continuing professional development

DCSF Department for Children, Schools and Families:
The government body responsible for schools in England (2007-2010)

DfE Department for Education:
The government body responsible for schools in England (2010 – present)

DfES Department for Education and Skills:
The government body responsible for schools in England (2001-2007)

EAL English as an Additional Language

EPO Enhanced Placement Opportunity:
A non-assessed school experience usually focused on a specific aspect of education such as early years or English as an additional language

GTP Graduate Teacher Programme:
A one year, employment-based postgraduate route into teaching in which students are based in school for the year- discontinued in 2013

HE Higher Education

HEI Higher Education Institution

ITE	Initial Teacher Education
ITT	Initial Teacher Training
MTL	Masters in Teaching and Learning *A postgraduate qualification for practising teachers, introduced in England in 2009*
NCTL	National College for Teaching and Leadership *The government agency responsible for teacher training and development since 2013*
NQT	Newly Qualified Teacher *The status of teachers in England during their first, or induction, year following completion of ITE*
OFSTED	Office for Standards in Education: *The body carrying out inspections of schools and ITE providers in England since 1992*
PGCE	Postgraduate Certificate in Education *The one year, university-led postgraduate qualification leading to Qualified Teacher Status*
PCK	Pedagogical Content Knowledge: *A model of teacher knowledge described by Shulman (1986)*
QTS	Qualified Teacher Status: *The professional qualification required by teachers in maintained schools in England*
RRP	Record of Reflective Practice

A pro-forma used by students at the university in this study for recording reflective entries against teaching standards

RTE Realistic Teacher Education:
An approach to teacher education originating in The Netherlands (see Korthagen, 2001)

TDA Training and Development Agency:
The government body responsible for the training and development of teachers in England (2005-2012)

TEAN Teacher Education Advancement Network

ULT University Link Tutor

Abstract

A shift of Initial Teacher Education (ITE) towards school-based training is underway in England, calling into question the place of a theoretical basis for teaching. Re-examining the relationship between educational theory and classroom practice is therefore particularly timely and links to long-standing discussions in the literature on what constitutes teachers' professional knowledge, the specific tensions between theory and practice in education and the implications for the structure of ITE. The study is rooted in models of teacher knowledge, of theory and practice nexus and of student teacher development. Within this context, the research offers new insight, picking up where previous studies have left off, by charting over a period of time what happens to students' initial preconceptions about theory and practice and investigating whether, how and why these change in the course of the subsequent journey to first employment. This is a longitudinal case study: five participants, representing a diverse range of profiles from a 2011-12 cohort, form the case group and data were collected before the course, through various stages of the programme and into first teaching posts through interviews, focus groups and documentary analysis. To contextualise the central case study, survey data from the wider Postgraduate Certificate in Education (PGCE) cohort were also gathered. The research finds these students to be far from naïve as they entered training but identified important shifts in the understanding and role of theory during the PGCE experience. Openness to theoretical perspectives is evident and far from being diminished by practical experience, this comes to assume a more prominent place as the course progresses. By exploring this journey, which culminates in a profile of the thinking of a newly qualified professional in the workplace, a contribution is made to current understanding of the development of knowledge for teaching that may help to inform future programme design. More specifically, the role of the university is reconsidered and suggestions are made for ways of working with students at the various stages of the process.

Chapter 1: Introduction and aims

1.1 The rationale for the study

The rationale for the study is based on a combination of three factors: current developments within Initial Teacher Education (ITE) in England, my own role and experiences within ITE and findings from previous research.

Over recent years, a tension has been evident in English education between moves towards a centralised, competence model of teaching and, simultaneously, a stated commitment from governments to greater autonomy (DfE, 2010). Shortly after the start of this doctoral work, there was a change of government in 2010 and early pronouncements from the new Education Secretary immediately signalled a significant acceleration, towards far more school-led ITE (now referred to, significantly, as Initial Teacher *Training*) and a diminished role for the Higher Education Institution (HEI). These developments seem to have two key implications. Firstly, the nature of the HEI's status and relationship with partnership schools is called into question: there is a pressing need to respond positively with a reconsideration of the traditional division of labour between universities and schools. Secondly, as programmes such as the Postgraduate Certificate in Education (PGCE) are reconfigured, the nature, amount and timing of the theoretical knowledge to be encountered by predominantly school-based students need to be carefully planned. An understanding of students' expectations and their receptiveness to different forms of knowledge at particular times is fundamental to these judgements.

From a personal perspective, I started work at an HEI some seven years ago, following a career as a teacher in primary schools. I was quickly struck by the complexity of ITE programmes and particularly by what I

initially perceived as a difficulty in transferring ideas from university to classroom. Admittedly my own priorities as a PGCE student had centred on short-term survival in school, rather than underlying principles of education, but undertaking my Masters course after a number of years' classroom experience had been a transformative process for me: it demonstrated the value of exposure to new ideas as a way of deconstructing and enhancing practice. Keen to encourage my students to draw on theory to question their assumptions and develop more challenging pedagogy, I collaborated with a colleague on a small-scale research project to this effect. This experience hinted at the potential benefits of exploring students' conceptions of teacher knowledge. My role as a tutor on the PGCE course gives me privileged access to students and their everyday experiences, meaning that emerging findings can be immediately incorporated into practice. This position, of course, could also be problematic and a clear ethical stance is important. Specific ethical issues presented by this study include the need to separate the dual roles and associated data held as both tutor and researcher and the possibility of over-burdening students with extra tasks on an already extremely intensive year's course.

In the course of my role, my developing familiarity with ITE literature also suggested this as an issue worthy of exploration. The relationship between a stable knowledge base and professional status, as well as the ambiguous nature of teaching in this respect has been highlighted (Schön, 1983; Shulman, 2004). Many authors discuss the remoteness of theory, including that derived from research, from teachers' practice (McIntyre, 2005; Conroy, Hulme & Menter, 2013), while theory itself may be problematic as a contested concept within education (Thomas, 2007). As a result, any view of teacher education predicated on the expectation of a transfer of theory, probably encountered at university, into classroom practice is potentially called into question (Korthagen, 2010a; Hodson, Smith & Brown, 2012). Simultaneously, the developmental journey of the student teacher may not be conducive to making links between different forms of knowledge. Two seminal sources, still much-cited despite their

age, paint a bleak picture of the prospective teacher. Lortie (1975) argues that student learning is heavily tainted by naïve preconceptions based on experiences as a pupil, while Fuller & Bown's (1975) model of development suggests a lengthy preoccupation with the self and survival before there is readiness for wider forms of learning. More recently, the substantial 'Becoming a Teacher' project, reported by Hobson, Malderez, Tracey, Giannakaki, Pell & Tomlinson (2008) finds that the relevance of theoretical aspects of ITE is often unappreciated by students, though this may vary over time and be dependent on prior experiences. Taken as a whole, these sources suggest an uneasy relationship between different sources of knowledge.

1.2 The issue to be explored

In summary, student teachers' learning, in readiness for Qualified Teacher Status (QTS) and the PGCE in England is highly complex. This is due in part to the requirement to demonstrate both professional, practical competence, assessed against prescribed national standards and simultaneously a high level grasp of theoretical principles. This is further complicated by learning taking place in two distinct types of location: the HEI and at least two different schools. Despite the well-established notion of partnership between these parties, integrating the learning experience into a coherent programme can prove very challenging. Student teachers' preconceptions about learning to teach may potentially exert a powerful influence over their development, but their views may also develop over time. Finding out more about students' understanding of the relationship between theoretical and practical learning allows teacher educators to shape ITE programmes more successfully to prepare these emerging professionals for the careers ahead of them.

Arising from this, an overarching aim was identified:

To understand the preconceptions held by students about the relationship between theory and practice in learning to teach, the way in which these conceptions develop in the course of the journey to Qualified Teacher Status and the implications of this for teacher educators.

As a means of achieving this, I identified the following initial objectives:

1. To discover preconceptions held by students, before commencing Initial Teacher Education about the relationship between theory and practice in learning to teach

2. To understand the way in which these conceptions might change during ITE and into first employment

3. To find out whether there are any key events during this period which are linked to any such changes

1.3 The anticipated contribution of the study

It is anticipated that the study will build on themes from the previous research of others. There are particular links, for example, to the aforementioned work of Hobson *et al.* (2008). Their paper reports more broadly on student teacher development across a range of routes, while this study considers in some depth a subset of this, by focusing on postgraduate ITE and the question of theoretical and practical knowledge specifically. Hobson *et al*. also directly call for further investigation of students' preconceptions and this has been taken as my starting point. Indeed, the eliciting of genuine (as opposed to retrospective) pre-course preconceptions in a longitudinal study spanning before, during and after training, is a novel feature of this study. The research, contextualised as it

is within current debates and initiatives, should be of immediate interest to teacher educators in England, including the rapidly growing number who are based in schools and who may have limited experience of ITE in its broadest sense. The fundamental question of the conceptualisation of the relationship between theoretical and practical knowledge has wider, long-standing international relevance, however. Potentially, all teacher educators, teachers and student teachers may benefit from the insights into the multi-faceted nature of teacher knowledge, the way that conceptions of this develop over time and, above all, the practices that are found to enhance a coherent, empowering and professional understanding of education.

1.4 The scope, context and structure of the study

The study is set within the ITE department and partnership schools of a large HEI in England and is centred on the academic year 2011-12. At the time of the data collection, just over 200 student teachers were recruited each year, of whom around half followed the one year Primary PGCE programme. This comprised two main assessed school placements in contrasting age groups, supplemented by additional focused school experiences. Students spent at least 18 weeks in school with the remainder being used for academic study, including credits at Masters level. Around a quarter of students specialised in the three to seven age range, while the rest focused on the five to eleven range. At the time, the programme was rated by the national inspectorate, The Office for Standards in Education (OFSTED), as 'outstanding': the highest possible grade.

A deeply held conviction, to which I allude in the title, is that issues surrounding teacher education and teacher knowledge are bound up with the nature and status of teaching as a profession. The review of literature aims, therefore, to locate teacher knowledge and issues of theory and practice more specifically within the context of professionalism, before

exploring models of student teacher development. Although the main focus is on ITE in England, international literature has been consulted throughout.

The research methodology is based on case study. The case is a group of five PGCE students in the 2011-2012 cohort. The longitudinal research design involves data collection from July 2011, before commencement of the course, through to October 2012, by which time all five were working in schools. The main methods used are interview and focus group with some documentary analysis. A small amount of additional data from the wider 2011-2012 PGCE cohort, for the purposes of triangulation, is also presented. The inherent limitations of case study for wider generalisation are recognised and discussed in a subsequent section. Despite the data being drawn from a particular cohort, the study is forward-looking in that it was conceived partly as a response to mooted changes in ITE that have now begun to come to fruition.

Chapter 2: Review of Literature

2.1 Introduction

The review of the literature seeks to provide a context for, and to inform, the data collection by exploring what is already known about the central concepts relating to the issue in question. At the heart of the review are a number of authors who have been particularly influential. These include international researchers in teacher education such as Fred Korthagen, John Loughran, Linda Darling-Hammond and Ken Zeichner, alongside key UK figures such as Donald McIntyre. The publications of Richard Pring and Gary Thomas on the nature of theory and Lee Shulman on teacher knowledge and professionalism have also been central to the study.

The initial core of readings was gradually and systematically supplemented by a very wide range of sources. Selection was guided initially by a need to represent different types of literature: theoretical models, research findings and policy initiatives. A further consideration was that the study simultaneously reflects a long-standing issue inherent in professional learning generally but also a fast-evolving, politically-driven field within ITE specifically. A combination of seminal works and current perspectives was required, therefore. Criteria for selection also centred on the quality of source and every effort was made to ground the study in recent research from peer-reviewed journals. Some, such as the Journal of Education for Teaching, were identified early on as representing the community and conversation to which this work aspired to contribute.

The review takes into account a number of broad dimensions that together make up the scope of the field of study. It moves from the underlying questions of professionalism and professional knowledge, to a consideration of theoretical and practical knowledge, concluding with a discussion of student teacher development. The nature and complexity of

these concepts is explored in the sections that follow, providing a theoretical framework underpinning the rest of the study.

2.2 Teacher education as preparation for a profession

2.2.1 Teachers as autonomous professionals

Much of the debate about learning to teach, including the complementary contributions of theory and practice, hinges on the prevailing characteristics of the profession for which students are being prepared. At the heart of this is a tension between two conceptions of teacher professionalism, summed up by Webb, Vuilliamy, Hämäläinen, Sarja, Kimonen, & Nevalainen (2004) as compliance and accommodation versus empowerment and autonomy. These positions will be examined in some detail.

Moore (2004) firmly identifies competence as the dominant discourse within education, citing the introduction of a national curriculum and teachers' standards as indicators of an interest in delivering content and developing learnable skills. Schools and universities are characterised as 'fearful locations engaged in the pedagogical equivalent of painting by numbers' (p. 85). From this perspective, professionalism is defined by following policy and meeting standardised criteria. Theoretical knowledge is therefore chiefly for the consumption of policy makers, who then offer a digested form of 'what works' to teachers. As Swann, McIntyre, Pell, Hargreaves & Cunningham (2010) argue, this selection of knowledge at government level marginalises the role of teachers' own judgments and personal theorising about practice. Quite apart from the questionable contribution of this conception of knowledge to an education system, fundamental issues relating to values within education are bound up in this. Freire's (1970; 1998) vision of teachers as 'unfinished', curious learners themselves, for example, appears very much at odds with this

centralised and prescriptive system. The competence model, a phenomenon by no means confined to England (Day & Smethem, 2009), appears to leave little room for teachers' ownership of their knowledge base.

Alongside the competence discourse, there is also a strong recognition that a degree of autonomy is an essential feature of any profession (Edwards, Gilroy & Hartley, 2002). This may take a number of forms, such as empowerment in decision making or the 'democratic professionalism' envisaged by Day & Sachs (2004): a collaborative enterprise, in which teachers make a contribution to the profession as a whole. With autonomy, however, comes responsibility and, as Moore (2004) recognises, there is the question of readiness for this, with a danger that teachers may be de-skilled after years of prescription. Webb *et al.* (2004) report that, in Finland, a country often cited as having a high status teaching profession, increased autonomy was not universally welcomed and led to a sense of inertia and increased stress among some teachers. Empowerment of this sort, it seems, may need to be a bottom-up change and not imposed from above. Direct international comparisons of this type, however, risk underplaying important cultural differences. Considering English teachers' changing conceptions of professionalism, Swann *et al*. (2010) present a picture of complex and often diverse views. These are based, nevertheless, on strong core beliefs in the existence of expert knowledge and, above all, in the importance of being trusted by the government and public. Drawn from a large-scale national study of several thousand participants, these messages are particularly striking. One might infer that it is this central issue of trust that is most at risk of erosion by the marginalisation of teacher judgment in favour of government approved knowledge.

From the current UK government, the messages are somewhat mixed. Although it is notable that the latest version of Teachers' Standards (DfE, 2012a) has removed previous references to reflection and innovation (TDA, 2007a), other pronouncements, such as 'The Importance of

Teaching' white paper (DfE, 2010) have promised greater autonomy and freedom at school level, albeit hand in hand with greater accountability. This could be seen as a move towards an era of 'informed professionalism' once envisaged by Barber (2002), whereby teachers have sufficient knowledge and skills to be entrusted with a degree of autonomy. However, as noted by Whitty (2006), centralised control over educational knowledge, codified in the form of standards and national strategies, calls into question the extent to which teachers may truly be seen as 'informed'. Stevens (2010) sees these two concurrent interpretations of professionalism, compliance and autonomy, as incompatible, but to suggest a straightforward dichotomy would be an oversimplification. Day & Smethem (2009), for example, convey the complexity of teachers' responses to reforms and argue for the enduring power, in the face of increasing prescription internationally, of 'good colleagueship, sensitive and purposeful leadership and their own sense of purpose.' (p.154). There remains, it seems, a desire among teachers for ownership of their professional knowledge. Much depends, therefore on teachers' capacity to enact this and this is bound up with teacher education.

2.2.2 Professionalism within teacher education

Within Initial Teacher Education (ITE), similar debates have been played out. Alexander (2010) sees providers of teacher education as easy targets, not fully aligned with, or trusted by, either practising teachers or the government. This separation perhaps has a further dimension in terms of the divide between many teacher educators and educational researchers. This is likely to exacerbate the aforementioned lack of ownership of knowledge. ITE in England, like education more generally, has been subject to codification in successive sets of standards and a consequent discourse centred on competence. Alexander (2010) recommends a move away from this on the grounds of such compliance obscuring greater critical engagement with knowledge. This is reinforced

by Stevens (2010) who argues that standardisation fails to do justice to the complexity of learning to teach. More controversially, Stevens also implies a link between what he sees as a 'bucket filling' approach to teacher education and similar practices in students' classroom teaching. While it is true that there is now a single set of standards for students and teachers alike (DfE, 2012a), the suggestion that meeting these standards necessarily results in a transmission approach to teaching and learning seems to be overstating the case. The latest standards are few in number and framed in broad terms: teacher educators need not adopt a prescriptive, instrumental approach to them. Nevertheless, as pointed out by Eaude (2014), they do suggest a simplistic model whereby professional expertise is largely about doing the same things better, rather than behaving in a qualitatively different way.

In an echo of the ambiguous government messages for teaching as a whole, two recent initiatives for teacher education have been launched that appear to be somewhat at odds with one another. On the one hand, drawing on the practices of high performing education systems overseas, a move towards teaching as a Masters level profession has been promoted. The House of Commons Children, Schools & Families Committee (2010) strongly recommended this additional qualification as a cornerstone of a commitment to ongoing professional development. As well as the funding, albeit short-lived, for a new Masters in Teaching and Learning (MTL) from 2009, Masters level modules were introduced into PGCE courses, partly as a form of alignment with other postgraduate qualifications (Jackson & Eady, 2010).

Concurrently, teacher education has also seen moves towards greater school-based provision. In an early speech as UK Education Secretary, Michael Gove articulates his vision, not just for teacher education, but also, implicitly, for the teaching profession itself:

> *Teaching is a craft and it is best learnt as an apprentice observing a master craftsman or woman.* (Gove, 2010)

Such a commitment to reduced university learning and more time in the classroom is echoed by a shift in terminology in government publications towards Initial Teacher Training (ITT) (DfE, 2012a; DfE, 2013), as opposed to Initial Teacher Education, implying a much narrower conception of teacher preparation. This ideology has been realised through the vigorous promotion of models such as School Direct (Gove, 2014), removing ownership of the process from universities and framed in official rhetoric as putting schools at the heart of the process (Taylor, 2013). As subject expertise and academic excellence among candidates come to be increasingly prized by government, there are even suggestions that ITE may be circumnavigated altogether (Boffey & Helm, 2013; Gove, 2014). Meanwhile, although funding for the MTL has been withdrawn, the government commitment to teaching as a Masters level profession in the long term has been nevertheless reiterated (DfE, 2012b). The potential limitations of such an ambiguous approach for teachers' professional expertise and status have been widely noted in the education press and professional bodies' responses (Kirk, 2011; Standing Committee for the Education and Training of Teachers, 2011).

Rather than focus on opposition to these moves, however, a more productive way forward may be to reconfigure thinking about teacher education to accommodate these new developments. Employment-based teacher education is not new and Hodson *et al.* (2012) offer a glimpse of this new landscape. They envisage a changed role for the university as a place of respite from the daily demands of practice, in the form of a space for thinking, questioning and making sense with peers. In this vision, the university's role is to facilitate an analytical process, with the need for theoretical knowledge arising naturally from the immediate experiences of the student. In order to consider the feasibility of such a role, and as a prerequisite for examining theoretical and practical aspects of knowledge, the nature and very existence of a definable knowledge base for teaching need to be considered.

2.3 The knowledge base for teaching as a profession

2.3.1 The existence of a knowledge base for teaching

Differentiating teachers' specialist knowledge from that of the educated layperson is at the heart of debates about teaching as a profession:

> *One of the challenges faced by efforts to gain professional status for teachers is that teaching is complex work that looks deceptively simple.*
> (Grossman, Hammerness & McDonald, 2009, p.273)

As these authors imply, recognition of a unique knowledge base for teaching may not be straightforward, but there remains a strong sense that this is a necessity for any profession (Carr, 2000; Edwards *et al*., 2002). Shulman (1986), for example, argues that professionals need to know the 'what' and 'why' as well as the 'how' and should be expected to communicate reasons for their decisions and actions. In a later publication, citing theoretical understanding as one of the essential features of all professions, he further asserts that 'professions legitimate their work by reference to research and theories' (Shulman, 2004, p.531). This suggests that professional knowledge is not just about expertise, but also public legitimacy; the perceived kudos associated with a theoretical underpinning for a discipline is also emphasised by Thomas (2007). It is possible, therefore, that a knowledge base is as much about status and entry into professional ranks as it is about the ability to perform at an appropriate level. Indeed, Shulman (2004) himself questions whether a formal, academic knowledge is really more about an entitlement to practise. Returning to the debate about teaching as a Masters level profession, one could reframe this as a move towards raising the threshold of entry rather than directly raising classroom standards. However, to deny the transformative nature of high level study for teachers would be an over-simplification and Masters level study for teachers has been linked

to a sense of professional assertiveness (Turner & Simon, 2013), suggesting once again the importance of professional autonomy.

If there is a broad consensus on the desirability of a specialist body of knowledge, its existence within teaching is disputed. Professional status is again at the heart of such debates. Schön (1983) makes a distinction between 'major' professions, such as medicine and law, with a stable knowledge base and 'minor' professions, such as education, suffering from 'shifting ambiguous ends and unstable institutional contexts of practice' (p.23). Hoyle (2001), commenting on extensive international meta-analyses, similarly claims that teaching is seen by societies as a 'semi profession'. The issue of the knowledge base seems to be significant: Neufeld (2009) sees teachers' expertise as narrow, managerial and lacking a conceptual, theoretical grounding, while Swann *et al.* (2010) suggest that teachers themselves are unconvinced that their expertise has a theoretical knowledge base. Pring (2004) concurs, adding that the cumulative body of knowledge that would justify any claims to education being a research-based profession is missing. The position is neatly summed up by Hoyle (2001) who suggests that, while the need for content knowledge is accepted, the nature of, and even necessity for, pedagogical knowledge remain ambiguous and contested. Paradoxically, it seems that the idea that teachers may exemplify professional autonomy by constructing personal, situated methodologies is simultaneously a potential barrier to professional status.

However, it is not merely the absence of an agreed canon that is at issue, but also its appropriateness within education. Schön (1983) himself rejects the 'technical rationality' model of applied theory, focusing instead on the alternative of the reflective practitioner within education. Hagger & McIntyre (2006) go as far as to suggest that teaching's inherent complexities and subtleties mean that understanding must be in terms of the particular, rather than the general: there is no such thing as a 'technology of teaching'. A lack of codified knowledge could present problems that go beyond questions of mere professional status. This is

argued by Neufeld (2009) who sees evidence of self-doubt and poor self-esteem when teachers try to assert their authority, leading to an inherent resistance to change. In some ways, the recent moves in England towards a view of teaching based around standards and universal, learnable skills (Moore, 2004) could actually provide opportunities for a shift towards more coherent knowledge production of a sort. Indeed the current United Kingdom government has shown an interest in evidence-based practice in the positivist sense, inviting a well-known author to apply principles of medical research to education (Goldacre, 2013). Nevertheless, the question of the appropriateness of this form of knowledge production for what is inherently an uncertain medium (Edwards *et al*., 2002) remains.

Such debates, clearly, have important implications for the structure of teacher education courses. Without an agreed or bounded theoretical basis, the existence of teacher education, as opposed to teacher training, could be called into question. In this respect too, it is arguably not only the knowledge base that is ill-defined but also the means of its communication. Shulman (2005) suggests that, unlike the 'major' professions, education lacks a 'signature pedagogy': the equivalent of the clinical rounds and bedside tutorials of the medical student, for example. Lortie (1975) noted long ago that, compared to other professions, such as medicine, law and engineering, entry to teaching requires a relatively long period of general schooling, but little 'specialized' education and a lack of 'mediated entry' in the form of gradual exposure to the role. While there remains some truth in this view, ITE in England has moved a considerable way from the US model experienced by Lortie, in which practical teaching was a fairly brief experience at the end of a long period of academic study. In England there is considerable uniformity of teacher education practice in line with official prescription, as noted by Alexander (2010). The consequently prevailing 'competence' discourse leads to a degree of standardisation, but based less on theory than on practicalities and compliance with centrally produced standards (Moore, 2004).

The view, therefore, seems to be of teaching caught in a bind: a knowledge base is necessary for professional status, but such a body of knowledge is difficult and perhaps even inappropriate to define in such a complex field of practice. By way of contrast, Carr (2000) offers a more empowering view. The very uncertainty and lack of agreement, he argues, could be seen to enhance the professional standing of teaching: compared to the so-called major professions, with their greater sense of agreed knowledge and 'right answers', the complexity of teaching requires a higher degree of professional judgement. Tripp (2012) concurs, suggesting that it is not knowledge *per se,* whether codified or not, but the diagnostic judgement involved in its application to specific situations that really signifies the teacher as a professional. To return to the idea of a changing role for the university, this might now be envisaged as one focusing to a greater extent on the skills of professional judgement and principled decision making, rather than knowledge transmission.

2.3.2 Models of a knowledge base for teaching

Although the very existence of a universally agreed body of knowledge for teachers has been widely questioned, therefore, there have been attempts to model knowledge for teaching. Perhaps the simplest distinctions are dichotomies between, for example, 'subject' and 'method' (Kosnick & Beck, 2009) or 'foundations' and 'methods' (Grossman *et al.*, 2009). Though limited, such divisions immediately illustrate the tension between subject expertise and pedagogy and the relative emphasis placed upon each. The diversity of knowledge required has been frequently noted and it has been suggested that, in terms of sheer complexity, the demands surpass those involved in a profession such as medicine (Shulman, 2004; Darling-Hammond, 2006).

Darling-Hammond (2006) offers a tripartite model of knowledge in terms of learners and learning; subject teaching and curriculum. While this accounts for the commonly accepted coverage, the question of how they

interact remains. The most recent model put forward in English government publications (TDA, 2007b) represents teacher knowledge as the intersection of subject knowledge *per se*, pedagogy and pupil development, all contained within the broader set of 'attitudes'. This is superficially similar to the model suggested by Gess-Newsome (1999) as 'integrative'. In this, however, pupil development (perhaps included within pedagogy) is replaced by contextual knowledge. This apparently subtle difference is potentially significant. The TDA (2007b) version, by omitting specific context and adding the dimension of professional attributes, can be seen to signify a more standardised and generalisable vision of the teaching professional's expertise. As Gess-Newsome (1999) points out, any model represented in this way suggests some degree of separation of the elements of knowledge and could imply a transmission approach to teaching as the subject knowledge *per se* has not necessarily been transformed for the learner. A more convincing model, therefore, is a 'transformative' view of knowledge (Gess-Newsome, 1999). This sees subject matter, pedagogy and context transformed into a new form of knowledge known as Pedagogical Content Knowledge (PCK). PCK was first described in more general terms by Shulman (1986) as:

> *The particular form of content knowledge that embodies the aspects of content most germane to its teachability.* (p.9).

The exact interplay of elements is somewhat fluid and no universally accepted conceptualisation exists (Nilsson, 2008). Nevertheless, if a distinctive form of knowledge, specific to teachers as professionals, is deemed important, then the widespread and enduring influence of this model is easy to explain.

A common feature of all of these models of knowledge is that they remain centred on the subjects of the curriculum and could be seen to represent teacher knowledge as an amalgam of largely discrete, subject-based bodies of understanding. Within a primary education context in particular, this view risks underplaying the links between subjects and the many other

forms of teacher expertise. In an attempt to define Primary teacher expertise, for example, Eaude (2014) adds to the 'domain' and 'craft' knowledge identified by others a third category of personal and interpersonal knowledge. Whether this third form of expertise can really be considered distinctive for teachers is debatable, however. In light of such arguments, developing just such a coherent knowledge base for Primary teachers might, therefore, present a particular challenge. With this in mind, it is important to turn to the question of the contribution of theoretical knowledge.

2.4 Views of theory in education

2.4.1 The contested nature of theory in education

The very term 'theory' is subject to diverse interpretations, both from within education and more widely, and is the subject of much controversy. Within the scientific tradition, Cohen, Manion & Morrison (2011) distinguish between broad, all-encompassing 'grand' theories and more specific empirical theories. An effective empirical theory, within this scientific view, has certain characteristics, such as the scope for testing (and thereby potential confirmation or rejection) and simplicity of expression. Other key features, also noted by Kuhn (1977), are compatibility with existing theories and the potential to spawn new research findings. Taken at face value, this could generate coherent explanatory frameworks, offering the opportunity for cumulative, incremental knowledge identified by Pring (2004) as lacking in education. However, Thomas (2007) points out the inadequacy of this model of theory for teaching. Education theory, he contends, is not normally falsifiable and therefore does not progress as it might do in the natural sciences. In contrast it is 'resilient, plastic, ill-defined' (p.69). The striking juxtaposition here by Thomas of the durability of beliefs on the one hand with their nebulous, fluid origins on the other is

an intriguing one. It would seem that a broader conception of theory is required.

Within educational contexts, Pring (2004) defines theory as:

> *The articulation of the framework of beliefs and understandings which are embedded in the practice we engage in.* (p.78).

This recognises the need to go beyond detached, abstract systems of explanation to include also assumptions about practice. Thomas (2007), too, suggests that theory has come to mean different things within education: theory as a contrast to practice (including personal theories and reflection); theory as generalisation and hypothesis; theory as a body of explanation and, finally, scientific theory. Thomas represents these positions on two continua (see Figure 2.1), allowing ideas to be located in the quadrants.

Figure 2.1: Continua of theory and practice (adapted from Thomas, 2007, p.29)

Although the idea of continua, also proposed by McIntyre (2005), is an appealing one, such models, by their very nature, are simplifications of a multidimensional concept. The horizontal axis, for example, is somewhat ambiguous. For Thomas (2007), this line is explained as a continuum from formally stated theory to informal knowledge. What it perhaps does not convey, therefore, is a similar, though not identical, progression from generalisable principles to situated, context-bound knowledge. Nevertheless, in a discipline this complex and multi-faceted, a nuanced view of knowledge on a continuum, rather than set apart as a dichotomy may be helpful and is a valuable guiding principle for data collection.

The broad view of theory emanating from practice, as well as the academy, is also evident in the work of Eraut (2007a) on professional

learning. He defines theory chiefly as 'codified knowledge', the guardians of which are often universities and publicly funded research councils. This is contrasted with uncodified, cultural knowledge, acquired through participation in working practices. Eraut, however, also regards practitioner maxims and practical principles as being at the boundaries of this codified knowledge. An added level of complexity when considering theory in the workplace is suggested by Argyris & Schön (1974). Not only are genuine 'theories in action' sometimes hidden behind publicly articulated 'espoused theories', but, they argue, there is a tendency in professional communities to avoid rigorously acknowledging and testing such theories. Once again, however, this presupposes a scientific orientation which may be inappropriate for education as a discipline. If a view of theory encompassing personal insights derived from practice is to be accepted, this end of the continuum merits further discussion.

2.4.2 'Craft knowledge' as a form of theory

Theory in education has sometimes been characterised in terms of the ancient Greek concepts of 'episteme' and 'phronesis' (Korthagen, *et al.*, 2001). Episteme refers to generalisable, objective and abstract forms of theory, while phronesis involves making sense of specific situations: or conceptual and perceptual knowledge respectively. The distinction echoes that put forward by Edwards *et al.* (2002) between theory of education and theory for teaching. Broadly, phronesis could be located in the upper right quadrant of Figure 2.1, leaning towards the unitary and the practical and possibly encompassing reflective practice and personal theorising. In many ways, phronesis is akin to the concepts of 'craft knowledge' (Hagger & McIntryre, 2006) and 'practical wisdom' (Shulman, 2004), both of which acknowledge the richness and depth of teachers' context-specific expertise and judgement. Korthagen *et al*. (2001) regard phronesis as a pre-eminent form of theory and Shulman (2004) too argues that what matters most is the development of judgement *in situ*, or the 'wisdom of practice'. The challenge identified by Loughran (2006) is the bridging

between these forms of knowledge in a meaningful way. Carr (2000) reframes these questions as ethical ones and the link to the central issue of teachers' judgements is again evident. His justification for an emphasis on phronesis is that this is fundamentally about moral and evaluative judgement, reinforcing Tripp (2012)'s argument for judgement as a hallmark of the professional. This, rather than technical considerations, is precisely the decision-making that should concern teachers, the debate about types of knowledge being subsidiary to the fundamental quest to articulate and express professional educational values.

These broader conceptions of theory are not without their critics. Lawes (2003), for example, cautions against the marginalisation of formal theory within education, echoing the aforementioned arguments above relating to professional status. A view of education based increasingly on personal theorising and reflection, she suggests, risks undermining the discipline. Similarly, McIntyre (1993) questions the value of reflection and theorising for novice teachers, due to their lack of experience. While some experience may be a pre-requisite, this argument seems to presuppose that this is always a solitary process, whereas Korthagen (2010a) sees structuring and supporting this process as a key role of the teacher educator. In any case, these arguments are based on a concern that reflection has supplanted other forms of theory. Perhaps a more fruitful question is to consider how personal theorising might be used as a link to any more established bodies of knowledge.

Some of the debate in this matter centres on terminology. Thomas (2007), while acknowledging the value of a range of practices, argues that the word 'theory' is over-used: 'thinking' and 'reflection' are perfectly adequate terms for some of these sources of knowledge, he suggests. Carr (2006), somewhat controversially, goes further still and dismisses what might be characterised as craft knowledge or practical wisdom as merely practitioners' beliefs. To define this as theory, he argues, is to render the whole concept trivial and vacuous. Furthermore, Carr claims that educational theory, in an authoritative, external and independent sense,

does not exist and cannot be separated from practice in order to produce universal or general principles; it has been created to fulfil a perceived need to justify practice. As a result, he contends that, 'we should now bring the whole educational theory enterprise to a dignified end' (p.137). Though an extreme position at odds with much of the other literature, this emphasises again the way that professional knowledge and professional status may be intertwined. Although the difficulty in deriving and applying theory in the scientific sense has been acknowledged elsewhere, this is also a semantic argument, hinging on whether the term 'theory' has any meaning if used so broadly. As a way of articulating and learning from issues of practice that are distinguished from mere experience, there is probably an argument for the broad spectrum view of theory. Carr's polemic, however, underlines the need to use this term judiciously in research due to its varied connotations.

2.4.3 Attitudes towards theory in education

The sense that theory is poorly regarded by many education practitioners is striking. Its popular perception within the profession is described, for example, as being almost a dirty word (McIntyre, 1993), a disease to be eradicated (Pring, 2004) and an unnecessary intrusion (Giroux, 1994). Korthagen (2010a) emphasises that this is a long-standing issue the world over and identifies four main causes. Firstly, new teachers are quickly socialised into existing patterns within schools; secondly, teaching is highly complex and context-specific; thirdly, student teachers bring with them durable preconceptions based on their experience as pupils and, finally, there is a mismatch between the practical knowledge required day-to-day and the formal knowledge produced by the academy. The common thread here appears to be the powerful inertia arising from the daily demands of each specific teaching environment. In reality, exposure to theories, long ago internalised, may play more of a role in practice than teachers realise, linking to Atkinson's (2000) view of the intuitive practitioner, unable to articulate decision-making behind lessons.

Nevertheless, if a perceived separation between theory and everyday practice is one issue, Smagorinsky, Cook & Johnson (2003) also identify a problem of hierarchy in which theory is seen to be aloof, above practice and acting unidirectionally upon it, while practice has little reciprocal impact on theory. Similarly, Watts (2009) suggests that:

> *To bow to a theory can be to deny the validity of one's own experience-based craft knowledge, contradicting their experience of themselves as a source of expert knowledge.* (p.689)

In this view, theory, imposed from outside and above, potentially poses a threat to teachers' professional identity. If theory is not regarded by teachers as a part of their everyday world, however, then it seems likely that students' only source of such ideas will be the HEI: a limited model in terms of sustainability.

Theory is often a product of, and associated with, research. Pring (2004), for example, sees research as a means of challenging the assumptions implicit in teachers' private theories of personal practice. As with theory more generally, the relationship of educational research findings to practice is frequently problematic. McIntyre (2005) makes a case for a significant gap between research findings and teachers' practice, suggesting that few teachers would claim to be influenced by research. This he attributes mainly to a stark contrast between the practical, pedagogical knowledge required by teachers and the abstract and generalisable findings generated by researchers, though it may also be the case that it is merely the language of practice that is lacking. Pring (2004) supports this view, suggesting that research is seen to have 'gone adrift from the complex, but common sense and practical world of education' (p.4). Like McIntyre, Pring directly calls into question any view of education as a research-based profession. Even more strikingly, Gore & Gitlin (2004) report, from teachers in the United States and Australia, that the value attached to research diminishes as teachers' experience

grows: others' research is useful only when personal solutions are deemed inadequate. A more nuanced view is offered by Procter (2012) who, in a small-scale UK survey, identifies a values-practice gap: while teachers may not feel able to engage with research habitually, their orientation towards it in principle remains favourable. Even when viewed in a more positive light, however, a gulf is apparent, Lampert (1999) arguing that research is frequently held in mystical reverence by practitioners.

McIntyre (2005) suggests a number of ways of bridging this gap, one of which is the creation of 'knowledge creating schools', with teachers acting as researchers. This may now be coming to fruition as part of the government's vision for teaching schools (DfE, 2013), which may have links to school-based ITE. Lampert (2000) is among those who also see teacher-researchers as part of the solution. In an argument reminiscent of the debate about what constitutes theory, she queries where the line between research and mere thoughtful practice would be drawn. This could also be seen to raise ethical questions about the point at which a teacher's enquiry requires formal ethical approval. There is a danger that such questions perpetuate the problem, however: thoughtful practice, elaborated upon and shared, may be a very valuable starting point.

2.4.4 Student teachers' views on learning from theory

The general scepticism within the teaching profession is partly reflected in the body of international research evidence specifically detailing student teachers' experiences in learning from theory. A view of theory as separate from practice, as something encountered only at university and remote from the reality of the classroom is prevalent in the literature (Segall, 2001; Hascher, Cocard & Moser, 2004; Berry, 2008). The implication seems to be that theory needs to be associated with, and perhaps even located in, the school-based elements of ITE to a far greater extent. This remoteness from practice could also be seen in terms of a lack of ownership of these ideas and Laursen (2007), for example, notes that student teachers describe theory exclusively as an existing product,

produced by others for the purpose of applying in practice. This echoes the distinction between episteme and phronesis and suggests a rather narrow conception of theory that omits any view of personal theorising.

The perceived dichotomy between theory and practice is linked to evidence of theory being judged by students as much less relevant compared to practice while learning to teach. Participants in the major study by Hobson *et al.* (2008) of English teacher preparation, for example, rated theoretical aspects of ITE as the least relevant and reported having too much theory in their training. Though one might question the validity of their judgement at such an early juncture, the perception seems clear. Lest this be seen as a peculiarity of teaching, however, Shulman (2004) claims that valuing practical experience over theory is true of all professional learning. Once again, there may also be a semantic dimension to such perceptions. Waege & Haugaløkken (2013) make the important point that 'practice' in this context is often taken to mean the act of teaching, whereas a teacher's practice also encompasses, for example, planning and reflection, both of which may be more overtly influenced by theory.

Nevertheless, a view of student teachers as uniformly hostile towards theory would be overly simplistic. There often appears to be a strategic view taken, whereby the usefulness of theory is measured by its immediate application to the classroom setting (Laursen, 2007). Postlethwaite & Haggarty (2012) propose a model, for example, of 'progressive filtering', whereby theoretical principles derived from university learning are retained only if they survive the double filter, first of the student's own background and preconceptions and then the 'truth test' of the classroom. Hobson (2003) categorises students according to their views on theory, finding that most are 'education-oriented apprentices', positioned somewhere between the 'proceduralist apprentices', focusing on the 'what' but not the 'why' and the 'understanding-oriented learners' willing to draw heavily on theory. While some theoretical background is valued by this majority group, there is little sense of this informing, or

providing a rationale, for their practice. A note of caution is also sounded by Ryan (2003), who points out that university is often under-acknowledged as a source of ideas. The emerging view, then, is perhaps one of ambivalence, rather than hostility, towards theory.

These student judgements seem to be related also to the way in which theory is used in ITE. Smith & Hodson (2010) suggest that even students on an employment-based programme see a value for theory, but particularly when related to specific classroom practice and discussed *in situ*, rather than at university. It seems that the immediacy of the link to practice is important. Given the absence of conscious links to theory in qualified teachers' daily thinking, removing theory from the exclusive domain of the university is significant but potentially challenging. For example, Medwell & Wray's (2014) suggestion that student teachers engage in forms of authentic enquiry within the classroom could usefully cast students in the role of theory builders themselves, but this implies placing new demands on the expertise of supervising teachers. As well as the question of where students encounter theory, the timing of its introduction is important. Theory has been found to be more meaningful to students when related to previous practice (Loughran, 2006; Hobson *et al.,*2008) suggesting, therefore, that theory might assume greater import in the latter stages of training. However, this should be set against Jackson's (2009) reporting of student teachers' ratings of theory and practice links diminishing considerably in the course of their training and Gore & Gitlin's (2004) finding that, in the long term, compared to students, experienced teachers come to see less value for theory. While attitudes towards theory are complex and uncertain, there seems to be greater consensus around the role of practice.

2.5 Learning from practice

2.5.1 Student teachers' opportunities for learning in school

The school-based components of ITE are consistently most highly valued by students (Hobson, 2003; Hagger, Burn, Mutton & Brindley, 2008), by virtue of being judged against the key benchmark of perceived relevance to the classroom. What is less clear, however, is how this learning takes place and the extent to which the activities most prized by students really do offer the greatest opportunity for development. School experience may mean a number of different things: a greater length of time spent on practical teaching in school may not equate to greater learning (Hascher *et al.*, 2004; Hagger *et al*., 2008). The need to orientate oneself towards colleagues and to survive and succeed on the placement can be prioritised above deeper forms of development. The implication is that, understandably, the demands of the immediate, assessed school experience may detract from some opportunities for transferable, future-oriented learning. A more important consideration might be how well equipped new teachers are to go on learning from practice beyond ITE.

Indeed, there are a number of ways in which schools may be seen as inherently limited for the prospective teacher's learning experience. Shulman (2004) identifies the conservatism often found in schools as one such issue:

> *Counterintuitively, the ostensibly conservative academy is the source of radical ideas. The field is where you encounter the elastic cord that pulls matters back to the conservation of extant habits of practice.* (p.534)

This may be an overgeneralisation, particularly when recent years have seen a succession of reforms to practice in English schools, but the apparent gap between education research and practice may be an influence again here. Furthermore, the apprenticeship model favoured by the current coalition government (Gove, 2012) may be in danger of squeezing out analysis and innovation (Lampert, 1999) and perpetuating either existing local practice or a standard, centralised approach. An

interesting perspective from the U.S. is offered by Zeichner (2010; 2012). Despite a number of caveats, he sees great potential benefit in an increased focus on practice. The specific terminology used, however, is revealing. A 'clinical' approach is advocated (Zeichner, 2010) and, elsewhere, a stated aim is: 'teaching candidates how to enact high-leverage instructional routines and practices.' (Zeichner, 2012, p. 378). The suggestion seems to be that a prescribed pedagogical repertoire will be offered and competently reproduced. Quite who decides what constitutes 'high leverage' (which itself has connotations of power and influence) is uncertain.

Despite evidence that schools perceive student teachers as beneficial for the 'rejuvenation' of experienced practitioners (Price & Willett, 2006), this is in stark contrast to the well documented phenomenon of student teachers limiting their own innovation and risk-taking when confronted with the realities of practice in school due to socialisation into the prevailing practices of their placement schools and mentors (Allen, 2009; Rozelle & Wilson, 2012). The suggestion is that practice and resources of the seasoned professional are frequently seen as more valuable in becoming a 'real' teacher than potentially innovative ideas gleaned from university. Edwards & Protheroe (2003), more specifically, suggest that students tend to 'close down on complexity' (p.231), as they focus on becoming effective deliverers of the curriculum. The emergence of a more pragmatic, less creative outlook through the PGCE experience is also noted by Stevens, Hodges, Gibbons, Hunt & Turvey (2006). More recently, in contrast, Mutton, Burn & Hagger (2010) report the ability of some students to respond more positively and to overcome such constraints as they progress through training. A key role they identify for ITE is in fostering a greater understanding of the learning process and appropriate attitudes for ongoing professional learning. Preparing students carefully, before practical teaching, to interpret the norms of the workplace in a constructively critical manner would seem to be important, therefore.

The inherent limitations of schools as sites of wider learning for student teachers are also evident when viewed through the lens of the literature on communities of practice. This phenomenon, popularised by Lave & Wenger (1991), characterises such a community as having three central features: a shared domain of interest, the building of relationships and a shared repertoire of practice. Newcomers are inducted through a process of legitimate peripheral participation (Wenger, 1998) that, superficially at least, resembles the gradual build-up of experience on a teaching practice within school. In reality, however, far from facilitating collective professional learning, schools have been widely seen as having cultures of isolation with few opportunities for professional discourse (Schön, 1983; Gratch, 2000; Wubbels, 2007; Harford & MacRuairc, 2008).

Returning to Lave & Wenger's (1991) work, it is telling that their definition of legitimate peripheral participation is 'engagement in social practice that entails learning as an integral constituent' (p. 35). This distinction hints at one of the key tensions for the student teacher in school: the need simultaneously to be a learner and a convincing practitioner, performing against specified standards. Calderhead & Shorrock (1997) link this to the theory and practice debate, distinguishing between the need to understand teaching and to perform teaching, suggesting that these may be learned in different ways and different places. The implication that school may not be a setting for understanding teaching is questionable, but, as argued by Mutton *et al.* (2010), an over-emphasis on demonstrating competence risks seriously compromising the learning of principles beyond those applicable to the immediate setting. The potential for a dysfunctional community of practice is also highlighted by Chambers & Armour (2011). Their research suggests that much of what students learn could be seen as an unofficial curriculum, consisting of pragmatic techniques for survival that can be at odds with the messages from university. It seems that a community of practice model that does not somehow incorporate the full range of student teacher learning and which is centred on the daily preoccupations of school practice is likely to be limited.

Another useful characterisation of workplace learning is offered by Eraut (2007a) who emphasises the importance of the uncodified, cultural knowledge, which is particularly powerful, but difficult to access, due to its tacit nature. Eraut's (2004) research, though focusing on employees, rather than students, identifies four types of activity which may be most conducive to learning: participation in group activities, working alongside others, tackling challenging tasks and working with clients. Initially, if one takes children and their families to be 'clients', this might seem neatly to encapsulate the experience of the student teacher. However, closer scrutiny raises significant questions. Opportunities for genuine collaboration, such as team teaching, insight into the expert thinking of experienced practitioners and licence to undertake challenging tasks in a supportive learning environment, for example, make particular demands of the mentoring system. This lies at the heart of students' school experiences and, if learning in the workplace is to be more than the mere accumulation of experience, then the role of mentors, or supervising teachers, must now be examined.

2.5.2 The role of the mentor in establishing theory-practice links

Linking everyday practice and broader principles is far from straightforward. Hagger & McIntyre (2006), while stressing the importance for the novice of the mentor's subtle and complex craft knowledge, identify some key obstacles standing in the way of student learning. Firstly, much of this expertise is tacit rather than overt. Evidence for the difficulty teachers have in articulating the thinking behind their decisions is also provided by Brown & McIntyre (1993) and Eraut (2007a). Berliner (1988) reinforces this argument by suggesting that the most expert teachers, while providing valuable models for students, may not make the best mentors, as they have moved furthest into a more intuitive form of practice. Furthermore, to return to Argyris & Schön's (1974) point, a distinction must be made between the principles genuinely underpinning

teachers' practice and the espoused theories that they may claim to hold. Seeking to understand what Argyris & Schön termed 'theories in use' necessitates observation of actual practice. To go beyond superficial observation and mimicry, however, requires students to be able skilfully to elicit their mentors' knowledge. As Zanting, Verloop & Vermunt (2003) have discovered, this is often problematic and needs to be carefully taught and planned for. Hagger & McIntyre (2006) also suggest that student teachers are not in a position to subject their mentors' practice to a sustained critical examination. Quite apart from lacking the expertise to do so, one might also add that the inherent power imbalance in the relationship makes such critique, even if reflected indirectly and implicitly, in the student's own practice, difficult. To these obstacles, another could be added. Mentors are bound up in what Loughran (2006, p.14) has termed 'the dailiness of school teaching.' Not only is there little time to reflect on their own practice, but the nurturing of a student teacher is always likely to be of secondary importance to the provision for the pupils.

Additionally, a fundamental tension is evident between two contrasting roles of the mentor. Students' learning and willingness to innovate are potentially severely compromised by the mentor's customary role as assessor against prescribed standards (Jones & Straker, 2006; Hobson *et al.*, 2008; Skinner, 2010). In this sense, the term 'mentor' may even be a misnomer, as the danger is that performance outweighs learning and there may be little incentive to enact ambitious forms of pedagogy encountered in more abstract terms at university or elsewhere. The mentor's parallel role as a critical friend sits uneasily alongside assessment. Even when acting as a nurturer, however, the emphasis has been found to be predominantly on practical teaching, to the detriment of other forms of student learning (Van Velzen, Volman, Brekelmans & White, 2012).

A further consideration in the mentor's role as 'broker' in student teachers' integration of theory and practice is that of interpersonal relationships, giving some credence to Eaude's (2014) emphasis on the interpersonal as a dimension of teacher expertise. Rice (2007) notes that mentors typically

have little, if any, grounding in adult education, largely developing their own theories of the mentoring role. Mentor-student relationships have been identified as a key influence on ITE retention and course completion (Chambers, Hobson & Tracey, 2010) and on developing attitudes and beliefs (Nettle, 1998). Rajuan, Beijaard & Verloop (2010) report the impact on perceptions of school experience of a match or mismatch between trainees' and mentors' expectations of the learning process. While extreme mismatches, predictably, may lead to dissatisfaction, strong matches can be equally counter-productive, resulting in potential stagnation. It seems that an element of challenge and an exposure to a range of beliefs and approaches is required for optimal learning. Students' views of the role and relevance of theory in everyday practice, therefore, have much to do with this multi-faceted relationship. If more effective learning, linking to theory in the broadest sense, is to take place in school, therefore, it seems that the role of the mentor may need to be reconceptualised.

Edwards & Protheroe (2003) advocate a vision of mentoring which moves away from polishing performance and curriculum delivery towards a deeper understanding of children's learning through a broader repertoire of techniques such as modelling and team teaching. In an argument hinting at the limitations of situated craft knowledge, they suggest that mentors need to move from the particular to the general. Hagger & McIntyre's (2006) aims for mentoring are more radical still, envisaging an expansion of school, as opposed to university-based learning, resonating closely with current government policy in England in this respect. The vision is clear, but the question remaining, is whether practising teachers, even if empowered in this way, would be able to take students beyond craft knowledge to make links with broader, generalisable forms of theory in the way that HEIs might. One way forward may be to seek a new, more equitable form of discourse between academic and practitioner: whether a notional transformative 'third space' (Zeichner, 2010; Burch & Jackson, 2013) or Lampert's (1999) 'discourse of practice' (p.170). The interplay between the principal settings for student learning, namely the HEI and

school, and the fluidity of the boundaries between them seem to be of great significance.

2.6 Initial Teacher Education: linking school and university

2.6.1 An activity systems theory perspective

A perception long-held by students is that theoretical learning takes place at university and practical learning, ideally applying this theory, takes place in school (Korthagen *et al.* 2001; Jones & Straker, 2006). The reality, of course, is more complex but, notwithstanding the blurring of boundaries, the two settings can feel to students like different worlds, sometimes characterised as the 'idealised' and the 'real', with distinct rules (McNamara, Roberts, Basit & Brown, 2002). One approach to considering learning across settings is to see this in terms of transfer. Transfer of learning across situations is frequently characterised as being poor (Hatano & Greeno, 1999; Barnett & Ceci, 2002) due to the situated nature of knowledge. The very interest in transfer, however, presupposes a transfer of theory into practice. Schön's (1983) critique of this in the form of a technical-rationality model shows the potential inadequacy of this perspective for the complexities and nebulous knowledge base of learning to teach. Eraut (2007b) further emphasises this tension by pointing out that this unidirectional view is at odds with the needs of the workplace. What matters more here is 'backward-reaching transfer' (p.13), or the ability, when faced with a new situation, to retrieve relevant knowledge from the past in an efficient manner. An alternative interpretation of these two settings and one that arguably does greater justice to their multidimensionality and interdependence is offered by activity systems theory.

As described by Engeström (2001), this is an attempt to represent learning as a collective enterprise, mediated not only by cultural artefacts but also rules, community and the division of labour. With its roots in social constructivist theory, Engeström's basic framework (see Figure 2.2) depicts the complex interplay at work when learning takes place in a human group.

Figure 2.2: Activity system model (adapted from Engeström, 2001)

Philpott (2006) uses this to model the HEI and the school as separate systems. In doing so, he identifies an obstacle to an integrated experience: although the outcome of passing the course is common to both, the objects of student teacher activity differ in these systems and may be at odds. This interpretation might, however, be questioned. For example, the implication that activity at the HEI is not also ultimately oriented to pupil learning may do ITE a disservice. Indeed, viewing these systems as discrete introduces a dichotomy that may not adequately reflect the more integrated world of partnership in the twenty-first century. To take one example, Philpott fails to acknowledge the overlapping membership of the two communities. ITE lecturers (also operating as visiting tutors in school), teachers (sometimes contributing to university sessions) and fellow students cross these boundaries. Furthermore,

Douglas (2012) has also shown that the object of even a single activity system may be contested. Taking student teacher learning as the presumed object of a school-based training system, his findings suggest that this may be construed, even within one school, in a multitude of ways depending on the facets of learning valued by the culture of individual departments. It is in fact debatable whether all schools would necessarily agree that student teacher learning is the object of their participation in ITE. As Philpott's (2006) interpretation suggests, students might instead be seen as one of the tools in a system working towards the object of pupil learning.

If the activity systems model has potential limitations in certain respects, it nevertheless offers a further, perhaps more valuable, contribution to an understanding of the interplay between university and school. This is the notion of 'boundary crossing' between different activity systems (Engeström, Engeström & Kärkkäinen, 1995). In order to facilitate learning and practice across two systems, such as university and school in this case, Engeström *et al.* advocate the identification of mediating artefacts or 'boundary objects'. Though the terminology has possibly unhelpful connotations of well-defined, fixed structures, these are characterised more loosely as 'the shared external representation of a problem or domain' (p.322). Objects may take the form of tangible artefacts, events or simply mental models. The suggestion is that, while consensus may not necessarily be reached, a shared understanding is possible and that this ideally takes the form of 'expansive learning' (Engeström, 2001) that goes beyond the limits of either system to encompass learning about the systems themselves. Problematising contested ideas and contradictions, therefore, may provide opportunities for deeper learning (Douglas, 2012; Haggarty & Postlethwaite, 2012).

The implication is that it may be productive to seek out such opportunities for co-construction of meaning between schools and universities. This collective, third object of learning might allow for the new discourse of practice envisaged by Lampert (1999). The challenge involved, however,

is highlighted by Haggarty & Postlethwaite (2012) in a study of the transition between student teaching and first appointments. A range of boundary crossing issues, such as discrepancies over the length of lessons, are identified but opportunities to capitalise as a newly-qualified teacher, on principles learned at university are largely lost. This particular transition, often marking the end of the university's overt role, is likely to be difficult. In contrast, the ongoing moves back and forth, during training, between school placements and university may be more conducive to the strategic use of boundary objects, though the physical separation of school and university communities makes this a particular challenge for ITE. Nevertheless, at a time when relationships are being recast, this could be a useful way of framing the dialogue.

2.6.2 ITE programme design and theory-practice links

To a great extent, the successful integration of theory and classroom practice within university and school settings depends upon the design and structure of ITE experiences. Darling-Hammond (2006), reflecting on attributes of successful U.S. teacher education programmes and outcomes, portrays a vision of a new kind of 'theoretically oriented' teacher whose practice is based on learning principles. This is reminiscent of Liston & Zeichner's (1990) argument that the goal of teacher education should be the development of prospective teachers able to articulate good reasons for their educational actions. If, however, theory is seen as a continuum, including a practical dimension (whether characterised as 'craft knowledge', 'practical wisdom' or 'phronesis'), then the claim that Darling-Hammond's 'new kind of teacher' is indeed new is questionable. Nevertheless, the central point is about integrating teacher knowledge in order to provide strong justification for actions and is at the heart of debates about programme design.

A number of challenges potentially exist. Darling-Hammond (2006), for example, highlights: overcoming unhelpful preconceptions; linking what

has been learned in theory with the kind of knowledge needed in practice and the sheer complexity of teaching. To these, Korthagen (2010a) adds a fourth: the aforementioned socialisation of students towards patterns of behaviour encountered within school. Korthagen also provides a far more challenging critique, claiming that the underlying premise of teacher education is fundamentally flawed. At the heart of this is a rejection, in line with Schön (1983), of the very attempt to transfer theory into practice, due to the uncertain and highly situated nature of teaching. An important tension, however, is noted by Berry (2008): acknowledging uncertainty and complexity must be balanced against ITE students' expectations of certainty and confidence from their tuition. By exposing the messiness of practice, tutors risk compromising their status as 'experts'.

Korthagen (2010a) offers an alternative paradigm for ITE, in the form of 'Realistic Teacher Education' (RTE). This is based on a three level model of learning (see Figure 2.3)

Figure 2.3: The three level model of teacher learning and the accompanying learning process (Korthagen, 2010a, p.410)

In this view, the initial interest is in practical experience in school. As a result of this, 'gestalts', or holistic, dynamic perceptions of a given situation, are formed, often subconsciously. Through opportunities for structured reflection, such impressions can be developed into 'schemata': conscious frameworks of concepts, based on de-situating the principles from the specific setting in which they were experienced. A final level is reached, once again through a process of structured reflection, when broader, generalisable theory is formulated. Korthagen (2010a) explains that this third stage may not always be reached, as the need to step beyond a particular situation to learn more broadly may not always be perceived. Ultimately, understanding generated at either schema or theory level may be internalised over a period of time and fed back into practice in the form of new gestalts through a process of 'level reduction'.

Theory as 'phronesis' is thus brought to the fore (Korthagen *et al*., 2001). Though rich in detail on the construction of students' personal theories, the model leaves the place of 'episteme' rather more open. This is to be introduced into the process as and when required in order to enhance understanding (Korthagen 2010a). This is somewhat ambiguous in Korthagen's work: in an early publication, it is conceded that, at pre-service level, its place, while important, will be limited (Korthagen & Kessels,1999), whereas, latterly, the introduction of theory is seen as having a significant place in moving onwards from the schema level (Korthagen, 2010b). In a variation on this, Lunenberg & Korthagen (2009) propose a flexible, interdependent relationship between experience, theory and practical wisdom, suggesting that any of these may be used by the teacher educator as a starting point for reflection.

The implications for ITE practice are potentially significant. This would require frequent alternation of school practice and university teaching. HEI input would centre on a process of reflection which is responsive to students' experiences, meaning that coverage compatible with a centrally prescribed set of standards for student teachers, such as those in England (DfE, 2012a), would need to be carefully mapped. The main change

implied is to traditional course structures based on university study first, followed by a later school placement. Loughran (2006), following this lead, argues for earlier school placements as a way of moving away from a transmission approach, based on preparing at university, towards pedagogy based on interpretation and developing awareness of situations encountered. This is supported by evidence from the UK study by Hobson *et al.* (2008). When considering the perceived 'relevance' of theoretical aspects in ITE courses, they suggest that these may be profitably used, at least in part, as 'explanatory frameworks for prior experiences.' (p.426). Waege & Haugaløkken (2013), similarly, report favourably on a programme achieving this by frequently interspersing school practice with university seminars. Darling-Hammond (2006) goes further, calling for a daily juxtaposition of theory and practice, with university sessions taking place after school hours so that immediate links may be made. With moves in England towards a wider range of student teacher learning occurring within school setting, this ambitious vision may become eminently achievable. The clear principle emerging from this literature is that theory used retrospectively as a means of making sense of practice may be particularly valuable.

Although more recent publications on this approach acknowledge a shift internationally in ITE towards a greater focus on practice and the role of mentors in school (Lunenberg & Korthagen, 2009), the assumption in many cases seems to remain that this is a university-driven process. In the English context, where a more radical move towards school-led training with a peripheral role for the HEI is underway, the applicability of the rigidly structured RTE model is questionable. Indeed, there seems to be a slightly derogatory tone to the depiction by Korthagen *et al.* (2001) of ITE in the UK, over a decade ago, as 'a situation in which (to a large degree) teacher education takes the form of on the job training' (p.270), suggesting that his innovations have in mind more 'traditionally' structured courses now largely superseded in this country.

Hagger & McIntyre (2006), in contrast, report on an experiment in truly school-based ITE (the Oxford Internship Scheme), in which HEIs are providers of a service to the core school experience. The approach bears many of the hallmarks of the Teaching Schools and the School Direct scheme advocated by the current UK coalition government (Gove, 2012). To focus simply on the theory-practice nexus within this, Hagger & McIntyre see great value in the opportunities for developing rich, embedded craft knowledge and bemoan the way that traditional forms of ITE have 'scandalously neglected the expertise of experienced teachers.' (p.158). They recognise, however, that changes will be needed in schools so that a new form of dialogue can be carefully structured and planned for in a climate of professional learning. Bearing in mind the inherent difficulties with school placements previously discussed, this may represent a considerable shift of culture. Nevertheless, the possibilities are hinted at by Conroy *et al.* (2013) who report favourably on an experiment, albeit within a different ITE system in Scotland, involving the embedding of HEI staff and learning practices within school settings. Developing this conceptualisation of school-based learning, Smith & Hodson (2010) argue for the safeguarding of formal, 'off the job', spaces for theorising. Significantly, for Smith & Hodson, this centres on challenging and extending specific experiences, implying perhaps the need for some form of generalisable understanding. As well as questioning the structure and the very nature of ITE, it is also important to consider those aspects of pedagogy which may help students to foster links between different forms of knowledge.

2.6.3 Pedagogy for ITE and theory-practice links

Reflection plays a key role in the ITE models discussed and reflective practice has become a cornerstone of much ITE in recent decades, strongly influenced by Dewey (1933). It is viewed by Schön (1983) as part of the demystification of professional knowledge, through the practitioner's scrutiny, in the open, of problematic aspects of practice. This suggests a

largely individual process, but the role of the HEI in facilitating student reflection and links between different forms of knowledge, through experiences with both ITE staff and peers is strongly supported in the literature (Van Huizen, Van Oers & Wubbels, 2005; Korthagen, 2010a). Hodson, Smith & Brown (2012) make the further point that such reflective discussions at university are also a way of moving students from an expectation of the university as a provider of theory to a view of university as place where mutual learning and, ultimately, theorising, takes place. The university becomes, therefore, a reflective space, both literally and figuratively.

The role of the teacher educator in reflection could therefore be seen as setting out deliberately to problematise practice and unsettle thinking. Segall (2001), for example, envisages university as an oppositional space, inviting prospective students to 'read' teacher education critically, as they would a text by being sensitive to problematic, defamiliarising concepts. While this has been seen as conflicting with the student's tendency to seek out simplistic explanations (Loughran, 2006; Berry, 2008), this view risks underestimating the student's capacity to appreciate complexity. Stevens (2010), investigating English postgraduates, found, for example, that they welcomed such problematisation. These approaches have much in common with Dewey's (1933) contention that reflection depends upon the need to solve a problem or to transform a doubtful situation into a more settled one. By emphasising to students the complexity of educational practice, teacher educators are creating a 'need to know' and, potentially, a rationale for drawing on insights from theory. Extending this further through teacher educators explicitly modelling to students the desired links and decision-making processes in their own ITE practice may be potentially powerful (Loughran, 2006; Berry, 2008); this technique is linked specifically to closing the theory-practice gap by Cheng, Cheng & Tang (2010). However, Lunenberg, Korthagen & Swennen (2007) note teacher educators' difficulties in moving beyond the sharing of useful tricks to making meaningful links to public, or academic, theory. They suggest that this seldom occurs, due less to a failure in the modelling process than a

lack of a theoretical grounding for everyday ITE practices. Teacher educators' decisions, it would appear, are governed by intuition or, at best, tacit theory, in much the same way as those of teachers in school.

A further proposition is to establish greater coherence within ITE programmes by focusing on a small number of key ideas. Smagorinsky , *et al.* (2003), rejecting the theory and practice dichotomy as unhelpful, view ITE instead as a process of concept formation, employing Vygotsky's (1986) distinction between complex, pseudoconcept, spontaneous concept and scientific concept. In this progression from vague, situated understanding rooted in everyday practice towards abstract and generalisable thinking, a loose parallel may be drawn with Korthagen's (2010a) pathway from gestalt, through schema to theory. Smagorinsky *et al.* (2003) argue that, in order to mitigate the socialisation into the norms of the school environment and consequent loss of university learning, ITE programmes need a strong 'conceptual home base' (p.1428). This takes the form of a central concept of teaching that is understood by all and reinforced consistently at both university and school. One such overarching concept might be a constructivist approach to teaching. Although this approach could be seen as overly prescriptive and, arguably, distinct notions of theory and practice may still exist, the vision of a shared, unified partnership understanding of teacher knowledge is a powerful one. In a similar way, Grossman *et al.* (2009) propose, for example, identifying a number of core practices in order to orient university teaching towards practice. Student teachers are provided with frequent opportunities to enact these at the HEI in the form of 'micro teaching' with their peers, thereby casting the student in the role of teacher, rather than pupil, during university tuition. The value of a coherent set of principles is persuasive, but the role of theory in this model remains somewhat under-developed.

Ultimately, the unification of theory and practice may be embodied in teachers capable of theorising their own practice. Edwards *et al.* (2002) see a key object of ITE as 'creating teachers who seek and interrogate

uncertainty' (p.134). The focus is on developing teacher agency and participation in knowledge creation, an aim linking clearly to questions of professional autonomy. Segall (2001) contends that it is just such an exploration of one's own learning that sets teacher education apart from teacher training. With the shift in English ITE towards school-led training (DfE, 2012a), rather than university-led education, the question of ownership of teacher knowledge is a particularly pertinent one. Edwards *et al.* (2002) recognise that a shift in culture is needed, however, so that schools become genuine learning communities:

> *The theorising teacher, drawing on and informing an educational knowledge base…is not the most ubiquitous image of the teacher-practitioner.* (p.99)

Evidence for students as theorists, rather than consumers of theory, is limited, however. Gray (2013), based on a small number of case studies, suggests that students researching their own practice come to appreciate the complexity of teaching and begin to question their own assumptions. Waege & Haugaløkken (2013), in a small-scale Norwegian study, report that, even when ITE is restructured to foster theory-based reflection on practical experiences, conceptions of theory and theoretical thinking in everyday practice remain rather narrow. If the theorising teacher is seen as a desirable outcome of teacher education, then it seems important to re-examine the developmental journey undertaken by prospective or pre-service teachers in order to identify moments when they may be particularly receptive to this sort of thinking.

2.7 Student teachers' conceptions about learning to teach

2.7.1 Preconceptions about learning to teach

An understanding of the learning paths taken by student teachers is potentially very powerful (Rozelle & Wilson, 2012). Managing preconceptions, in particular, has been identified as one of the most important challenges facing teacher educators (Darling-Hammond, 2006; Korthagen, 2010a). The need for further research in this area is explicitly highlighted in the work of Hobson *et al.* (2008) but it is important to note that data collection for this study, like many others, begins early in training and students' reported preconceptions are therefore based on retrospection. Lortie (1975) famously coined the term 'the apprenticeship of observation' (p.61) to describe the process, peculiar to teaching, whereby new students arrive with preconceptions based on their observations and impressions of teachers from their time as pupils. Unlike entrants to other professions, these newcomers have already been active agents within their chosen professional field (Moore, 2004). This relates to Schuck's (1998) contention that prospective teachers are comprised of three 'selves': self as student teacher, self as teacher but also self as former pupil, all of whom need to be addressed in different ways. The central notion of the beginning student teacher having the vantage point of the pupil and therefore seeing classroom practice in uncomplicated and superficial terms has been noted also by more recent researchers such as Crowe & Berry (2007). As Berry (2008) points out, teaching in this sense is both familiar and unfamiliar to beginning students.

A tendency to hold more general unsophisticated preconceptions at the start of training has been widely identified (Younger, Brindley, Pedder & Hagger, 2004; Hammerness, Darling-Hammond & Bransford, 2005; Loughran, 2006; Crowe & Berry, 2007) and there is a degree of consensus about these characteristics internationally. Calderhead & Shorrock (1997) report UK students' early emphasis on pupil engagement, having fun and a 'technicist' view of learning to teach as knowledge and skills acquisition and Joram & Gabriele (1998) in the US identify four beliefs commonly held: that learning to teach takes place mainly in the field; that this learning involves copying teachers; that pupils' learning is straightforward and that behaviour management is the main concern. Kroll (2004) sums up early

student thinking as ‘naïve views of teaching as telling and learning as copying or memorising what is ‘true’’ (p.200). Smith & Schmidt (2012), meanwhile, highlight the affective dimension of students’ early conceptions: ideas of teaching, they suggest, are very often shaped by memories of their own influential, or favourite, teachers. In short, students may have a wealth of experiences and knowledge, but these are not necessarily advantageous.

In considering the significance of these apparently naïve student preconceptions on future learning, Joram & Gabriele (1998) suggest that they act as filters for what is learned, so that new information is assimilated into existing structures. Following this line of argument, dispositions shaped by, among other things, experience as a pupil, are likely to be self-perpetuating to a certain extent. Wubbels (1992) argues that student teacher preconceptions are particularly resistant to change, not just because of prior ‘apprenticeship’, but also due to deeply held right-brain ‘world images’ that are qualitatively different from the left-brain logical language of the university. In his discussion of strategies to take such images into account, it is notable, however, that Wubbels’ stated intention is to improve transfer from campus to practice. As has been previously established, this unidirectional model of transfer seems inadequate for today’s ITE environment.

At this point, a degree of caution is needed, however. This characterisation of beginning students as little more sophisticated than pupils potentially underestimates the experiences which current ITE students in England bring with them. The English government, for example, requires ITE providers to assess candidates’ suitability to teach as part of a rigorous selection process (NCTL, 2013). Recent classroom experience is therefore highly likely to be a prerequisite. Furthermore, as Hagger & McIntyre (2006) point out, a focus on naivety risks rejecting these prior conceptions as simply unhelpful when, in fact, they need to be taken seriously and can provide an important starting point for ITE.

If it seems broadly accepted that student teachers' preconceptions have significance for their training, there is also a degree of consensus about the need to address unexamined assumptions more directly (Hammerness *et al*., 2005). Van Huizen *et al.* (2005), for example, recommend confronting the publicly stated rationale for the course with the students' private perceptions at the outset in order to create a personal orientation to learning. One such assumption is illuminated by Smith & Schmidt (2012), who found the concept of caring to be at the heart of many 'favourite teacher' narratives. If left unexplored, this sort of preoccupation, while admirable, could lead to disillusionment in the face of the daily realities of the teacher's role. Such self-examination may need to extend to reflection on the nature of knowledge itself at an epistemological or ontological level as a prerequisite for discussing approaches to teaching in school (Raffo & Hall, 2006; Fisher & Rush, 2008). Although the focus here is on students, assumptions may also be held by ITE tutors. Martin & Russell (2009) underline this point by suggesting that an interest in students' preconceptions should form part of a wider, overtly disciplined approach to our own practices, of which this study could be seen as one example.

2.7.2 Models of student teacher development

Of the attempts to model the developmental journey of the student teacher, perhaps the most enduring, despite its age, seems to be the structure proposed by Fuller & Bown (1975). This seminal model, summarised in Table 2.1, based upon a meta-analysis of over three hundred previous studies, identifies four stages of development. Though much critiqued since, it offers a valuable starting point, broadly characterised as a journey outwards, from a preoccupation with the self towards a focus on the learner.

Stage	Characteristics of teachers
1. Preteaching concerns	• Identify with pupils, based on own experiences • Unsympathetic to teachers

	• Not aware of realities of teaching
2. Early concerns about survival	• Concerned about own survival as a teacher • Focused on class control, content and evaluation of performance • Find this a period of stress
3. Teaching situation concerns	• Focused on demands of teaching situation • Realise relevance of theoretical knowledge • Still focused on own performance
4. Concerns about pupils	• Concerned about pupils' learning and needs • Relate to pupils as individuals • May feel unable to deal with these demands adequately

Table 2.1: A summary of Fuller & Bown's (1975) stages of teacher development

Subsequent criticisms of this model add layers of nuance to what seems, in essence, a somewhat simplified view of a highly complex process. One question raised, for example, centres on the credibility of any such stage theory based on a sequence of discrete steps (Capel, 2001; Burn, Hagger & Mutton, 2003). Though this may be valid, a close reading of Fuller & Bown's original text suggests that the stages were not necessarily ever conceived in such rigid terms by the authors themselves:

> *Whether these really are 'stages' or only clusters, whether they are distinct or overlapping … has not been established.*
> (Fuller & Bown, 1975, p.37)

Centred as it is upon student concerns, it is immediately striking that this is a model based on deficit. Powerful assumptions are made about the negative impact of the process on the individual, learning to teach being described as 'awful' (Fuller & Bown, 1975, p.48). Nevertheless, more recent international research largely upholds the central notion of a shift of concerns from the self outwards (Capel, 2001; Burn *et al.*, 2003; Rajuan,

Beijaard & Verloop, 2008), while refining other aspects of the journey. Conway & Clark (2003) identify, along with the move outwards towards the learner, a simultaneous move inwards in other respects, as students become more reflexive and self-aware. Others challenge the view of sequential concerns, arguing that issues such as pupils and classroom management are at the forefront throughout (Burn *et al.*, 2003) or that concerns are not left behind but revisited repeatedly (Capel, 2001). An important limitation to note is that such models often presuppose an incremental journey of improvement. Burn *et al.* (2003), however, report that the performance of participants on postgraduate UK Secondary programmes actually regresses towards the end of the course. Similarly, in a study of Hong Kong students, Tok (2011) finds attitudes towards ITE becoming less positive over time.

Another long-standing and highly influential model of student teacher development is provided by Kagan (1992), based, like Fuller & Bown (1975), on a meta-analysis of earlier studies but seeking to go beyond Fuller & Bown's narrow focus on teacher concerns. In many respects, this validates Fuller's work in that, once again, a gradual shifting focus from self to instruction and finally to pupil learning is noted. Significantly, however, Kagan argues that a student's initial preoccupation with themselves is not a weakness but is a necessary step. The resolution of this self-image question is what enables the focus on pupils to emerge: the two are inseparable. This process is brought about partly by confronting preconceptions and through the cognitive dissonance of being placed with teachers whose views may be at odds with theirs. One might argue that this dissonance could also be induced by the introduction of theory that challenges these early assumptions. This view of later development being predicated on resolving early needs is reinforced by Hagger & McIntyre (2006) who suggest that basic competence needs to be established before more sophisticated forms of learning are initiated.

Kagan's (1992) findings are fairly scathing about the effectiveness of ITE, which is seen to offer inadequate preparation for the realities of teaching.

Much of her critique, however, needs to be set within the context of US practice over twenty years ago. Calls for more time spent in school, attention given to procedural knowledge and the valuing of teachers', informal personal theories have been largely addressed in current PGCE courses. A further point made by Kagan concerns the stability of students' views over time, also identified in different forms by Wubbels (1992) and Calderhead & Shorrock (1997). Kagan attributes this to a lack of impact on the part of ITE programmes but this contention has been subsequently challenged (Nettle, 1998), with questions raised over the selection of studies analysed.

Berliner (1988) offers a further, highly influential meta-analysis, focusing on the defining features of teachers at various stage of proficiency. Of interest for this study is the characterisation of the 'novice': a student or newly-qualified teacher. Berliner suggests that qualitative differences exist between novice and more expert teachers. In keeping with Fuller & Bown (1975) and Calderhead (1991), there is acknowledgement of the affective dimensions of learning to teach and a suggestion that student teachers' needs centre on issues such as emotional support, learning to perceive and familiarity with basic routines. Little distinction is made, however, between different stages within this broad 'novice' phase. Looking closely at Berliner's text, the expectations of beginning teachers seem limited for today's postgraduate students on courses centred on school experience and based around Teacher Standards (DfE, 2012a) as a measure of competence:

> *The real goal of the first year teacher, entering through traditional or alternative routes, is that of muddling through until it all starts making sense and until some of what is required to run the classroom is routinised.* (Berliner, 1988, p.61)

Nevertheless, Berliner does raise the important issue of readiness for particular forms of learning. Like Korthagen *et al.* (2001), he argues that theory has greater impact when encountered after practice and, in an echo

of McIntyre (1993), further suggests that, without extensive experience upon which to base it, reflection too may be of little value to the novice.

An important implication arising from Berliner's (1988) analysis concerns the transition into employment. Universities, he suggests, should retain some responsibility for students in their first years of teaching. This view of student teacher development, extending beyond the end of formal training, may be significant. As Haggerty & Postlethwaite (2012) point out, it is not simply that NQTs experience the shock of assuming responsibility for a class, but also the fact that there is a tendency to become increasingly conservative, to fit in rather than to challenge the new context. If new teachers are to link theory and practice effectively, it is conceivable, therefore, that a greater HEI presence during early employment may help to lessen this 'closing down' and may point to a new position for universities in the ITE landscape. The fact that no significant large-scale meta-analyses have been published in recent years suggests, on the one hand, that student teacher development may be rather predictable but, on the other, that the time is right for a reappraisal in light of the current moves towards new forms of teacher preparation.

2.8 Summary

As a result of this review of the literature, an emerging framework, represented in Figure 2.4 is proposed. This framework is summarised below, with indicative literature drawn from the preceding review.

Figure 2.4: the theoretical framework

Students enter ITE with powerful but unsophisticated preconceptions (Lortie, 1975; Joram & Gabriele, 1998; Younger et al, 2004). These are assumed to be operated upon over time by both the nature of teacher

knowledge and by ITE experiences (Fuller & Bown, 1975; Calderhead & Shorrock, 1997; Hobson *et al.*, 2008). Teacher knowledge itself, drawn from theory and practical experience, is seen to be bound up with debates about the status of teaching as a profession (Shulman, 2004) and the nature and very existence of an agreed body of knowledge for teachers is recognised as highly contentious (Schön, 1983; Hagger & McIntyre, 2006). Theory is a contested and multi-faceted term (Carr, 2000; Thomas, 2007) and is regarded in this study, not as entirely distinct from practice, but as part of a broad continuum that includes practical knowledge (McIntyre, 2005; Thomas, 2007). Of the many definitions, the most appropriate, from this broad, all-encompassing perspective would seem to be that offered by Pring (2004), referring to a framework of beliefs and understandings embedded in practice. Students' conceptions of knowledge for teaching are mediated through their training and its structure (Loughran, 2006; Lunenberg & Korthagen, 2009). At the heart of this is the interaction between learning in two distinctive and physically separate locations: university and school. The integration of these may be challenging (Loughran, 2006; Korthagen, 2010a) but there is space in between for potential overlap. School is regarded as the more important of the two by students (Hascher *et al.*,2004; Hagger *et al.*,2008). Inextricably linked to these experiences is the affective dimension of learning to teach, which is acknowledged to be an emotional as well as cognitive journey (Chambers *et al.*, 2010).

The framework is reflected in the set of propositions in Table 2.2. These are not hypotheses to be tested, in a positivist sense, but a means of identifying clear lines of enquiry to guide the data collection. As Baxter & Jack (2008) argue, the use of propositions can help to keep a case study within feasible limits: an important consideration with a longitudinal design. The study, therefore, seeks to add to this literature by taking, as a starting-point, pre-course preconceptions about learning to teach. These conceptions are to be charted through training and into first employment, providing a longitudinal portrait of the learning journey. Within the context of Primary teacher education at a large HEI in England, the six lines of

enquiry allow the perceived relationship between, and nature of, theory and practice to be closely re-examined. At a time when English ITE is being reconfigured and its underlying principles and structure questioned, this offers an insight into one aspect of the student as a learner. The methodological approach is outlined in the following chapter.

Original Propositions arising from literature with indicative references	Six corresponding lines of enquiry
• There is a lack of agreement about what constitutes teachers' professional knowledge *(Schön, 1983; Shulman, 2004; Hagger & McIntyre, 2006)*	<u>WHAT is teacher knowledge?</u> 1. What constitutes teachers' knowledge?
• 'Theory' in education is a broad and contested concept *(Thomas, 2007)* • There can be a scepticism about the value of theory to teachers *(Pring, 2004)* • Students often believe most of their learning takes place in school *(Hagger et al.,2008; Hascher et al.2004)*	<u>WHERE does this knowledge come from?</u> 2. What is the nature and role of theory in education? 3. What is learned in school and how? 4. What is learned at university and how?
• Students may begin ITE with simplistic preconceptions of teaching *(Lortie,1975; Wubbels, 1992; Joram & Gabriele, 1998)* • Though somewhat resistant to change, students' preconceptions about teacher knowledge *are* likely to develop over time *(Fuller & Bown, 1975; Calderhead & Shorrock, 1997; Hobson et al., 2008)* • Making links between theory and practice can be problematic on ITE courses *(Korthagen, 2010a; Loughran, 2006; Philpott, 2006)* • The structure of ITE courses has an impact on conceptions of the relationship between theory and practice *(Loughran, 2006; Lunenberg & Korthagen, 2009)* • Emotions and relationships play an important role in learning to teach *(Chambers et al., 2010)*	<u>HOW does this learning take place?</u> 5. What is the learning journey and how does student thinking develop? 6. How does learning link and make sense?

Table 2.2: Propositions arising from literature review and corresponding lines of enquiry

Chapter 3: Methodology and methods

3.1 Introduction

The study is set in the ITE department of a large English HEI and focuses on a one year Primary PGCE programme, undertaken by around 100 students each year. To reiterate, the objectives of the study are:

1. To discover preconceptions held by students, before commencing Initial Teacher Education, about the relationship between theory and practice in learning to teach

2. To understand the way in which these conceptions might change during ITE and into first employment

3. To find out whether there are any key events during this period which are linked to any such changes

In this chapter the approach to the study is articulated and justified in terms of its philosophical underpinning; the particular approach decided upon; the design and implementation of the data collection and the methods of data analysis. Considerations of ethics and the quality of data are also prominent.

3.2 The philosophical underpinning for the study

Fundamental to any research study is transparency and clarity about the underlying 'world view' of the researcher in ontological and epistemological terms. Many aspects of research have their origins in scientific study and, consequently, a positivist paradigm. This is a position based on an ontological view of reality as singular and awaiting discovery, with an emphasis on objective, empirical data This attitude of 'objectivity, strangeness, surprise, shorn of prejudice and preconceptions' (Hughes & Sharrock, 1997, p.39) certainly suggests rigour, but as Lee (2009) points out, true objectivity is questionable not only as a possibility, but also as a goal, within the social sciences. Within the proposed study, for example, students' conceptions of the role of theory are complex in their construction and a single consensus or 'truth' is not necessarily being sought. In strictly 'scientific' terms, the emergent claims are unlikely to be falsifiable and the methods required to explore participants' conceptions, as opposed to actions, are not those of empiricism.

A further key tenet of a positivist viewpoint is a distinct separation between the researcher and the researched. This 'discrete dualism' of the knower and the known, referred to by Lincoln & Guba (1985, p.37) has limited relevance to what must be a joint exploration of understanding within a social context. Indeed, the distinctive nature of a professional doctoral study, arising as it does from professional practice (Bourner, Bowden & Laing, 2001) made such a separation particularly hard to envisage. As a logical consequence, the question of meanings and values is also central to this discussion. From an empirical, positivist viewpoint, concepts such as the meanings and understandings held by participants are outside the realms of what counts as objective knowledge. These ideas, however, are at the heart of the study in question and can be seen to form a different kind of knowledge. Subjectivity and interpretation play their part and reflexive research practice, as advocated by Lee (2009) offers transparency around these issues. As Burton, Brundrett & Jones (2008)

demonstrate, non-positivist research is judged by a different set of criteria, emphasising, for example, internal over external validity. The positivist ideal of value-free research is particularly untenable in a study involving one's own practice: every aspect from initial stimulus and choice of research question onwards is inherently value-laden. If a positivist position was therefore inappropriate for the research in question, the implication was that a form of interpretivism may have been more fitting.

Ontologically, interpretivism has sometimes been characterised as a rejection of a single objective reality (Lincoln & Guba, 1985; Cohen *et al.*, 2011). While this study adhered to this view where the subject of research is human views or conceptions, this does not represent a wholesale rejection of reality in all forms of enquiry. The decisive factor is the subject in question and, as Pring (2004, p.32) puts it: 'Man is not a subject of science.' The cornerstone of interpretivism, however, is the focus on understanding rather than explanation (Schwandt, 1998) and this aim very much underpinned the study, as the approach was one of tentative theory building (Punch, 2009). Meanings and interpretations of the participants were the primary interest and there it is recognised that these are complex, variable and multi-faceted. The epistemological premise is that these can only be understood from within, through the authentic voices of the participants, embedded in their contexts.

Within this interpretivist paradigm, the perspective taken was largely constructivist, in the sense that knowledge of the social world is assumed to be created, rather than discovered, through the research process. This implies, furthermore, that what counts as reality is socially constructed collaboratively: the act of participation in such a project may itself create new meaning and give rise to some of the conceptions expressed (Smith & Schmidt, 2012). The observer, as Schwandt (1998) suggests, is and should remain, entangled with the observed. It seemed appropriate that the student teachers in this study, as active learners and reflective educators themselves, should be empowered as true participants instead of mere objects of the research process. Multiple constructions were

therefore possible and the point of interest became not how true, but how well informed or sophisticated, these were (Guba & Lincoln, 1998). At this point, a tension, however, is evident in the interpretivist ideal of research free from preconceptions and a priori frameworks (Krauss, 2005). If, as the researcher, I am part of the context being studied, the very choice of research question and rationale presupposed some previous conceptualisation.

Overlaps with phenomenology, as a form of investigation of individual interpretations of experiences (Pring, 2004), were also apparent. In this case, the study centred on the well-defined and vivid experience of the PGCE course. The phenomenologist's 'bracketing off 'of common-sense beliefs and assumptions, the interest in detailed, authentic experiences and the focus on in-depth personal accounts were pertinent. However, Denscombe (2007) emphasises that phenomenology does not seek to analyse or interpret these experiences and is not concerned with abstract concepts. Therefore, while the study valued participants' own voices and perspectives, taking, in this respect, what Hobson *et al.* (2008, p.408) have called a 'phenomenological slant', the conceptualising of the relationship between theory and practice is also fundamental and the focus went beyond merely faithful description into analysis and tentative theory building.

It is also important at this juncture to clarify the nature of 'conceptions' and 'concepts' themselves. At a basic level, these might simply be thought of as ideas or notions (Collins English Dictionary, 1991, p.333). These terms are sometimes used almost interchangeably with' perceptions' in comparable studies (Hobson, 2003). However, I attempted to make a distinction: conceptions go beyond mere awareness and imply a more abstract form of thought and, above all, understanding; it was this that I hoped to access. Vygotsky (1986) offers a useful additional distinction between formally taught 'scientific' concepts and 'spontaneous' concepts, which are 'situational, empirical and practical.' (p.194). In seeking to understand students' personally held beliefs, it is the latter self-generated,

complex and contextually-bound form of conception that was of prime interest.

3.3 Case study

3.3.1 A consideration of research approaches

These ontological and epistemological assumptions began to imply the most appropriate methodological approach to be taken, though a number of possibilities needed to be considered before one could be settled upon. The need for an in-depth account of participants' conceptions ruled out the use of survey, which is more suited to gathering large-scale, generalisable data (Cohen *et al.*, 2011). However, there did seem to be a role for this form of data as a means of triangulation if a smaller central sample was to be used. A further approach to consider was that of action research. Initially, the emphasis on participants' creation of their own identities and the incompleteness of knowledge (McNiff, 2002), seemed fitting. However, the concern of action research is usually with changing personal practice on a relatively small scale and it seemed important, ethically, to avoid implementing any kind of intervention that might significantly privilege or disadvantage the participants compared to their peers. Kemmis & McTaggart (2000) also concede that the price paid for improvement to practice can be a lack of methodological and technical rigour and Hayes (2003) goes as far as calling into question the research credentials of this approach. Although Hayes' characterisation of action research as professional investigation into practice partly overlaps with the aims of a professional doctorate, the intention was to produce insights based on rigorous inquiry that go beyond the personal domain. Crucially, as Pring (2004) and Stenhouse (1981) agree, 'proper' research needs to stand up to public scrutiny.

An interest in naturally occurring phenomena suggests consideration of ethnography. Although, as a tutor, I inevitably participate in the social setting of the PGCE, my interest was not primarily in social activity; participant observation as a central method would not yield the insights into thinking and conceptualising required. The same concern with preserving 'ordinary activity' and avoiding intervention is used, however, by Stake (1995) as an argument for case study as an approach. Furthermore, Yin (2003) advocates the use of case study when the phenomenon being studied is indistinguishable from its context. In this instance, the phenomenon of evolving student conceptions of theory and practice can indeed said to be inextricably linked to the PGCE course which provides the experiences underpinning this journey.

Case study has been variously defined but is concisely summarised by Bassey (1999, p.47) as 'study of a singularity conducted in depth in natural settings.' Others, such as Pring (2004), similarly emphasise an examination of the unique and the particular. While this intense focus and concomitant sense of co-construction and negotiation between researcher and researched are very much in keeping with the epistemological position already outlined, the mention of uniqueness immediately highlights an inherent limitation with this approach. However, Simons (1996) famously sums up the 'paradox' of case study, which is that: 'by studying the uniqueness of the particular, we come to understand the universal' (p.231). The potential for gaining insight into the universal, however, is largely dependent on the careful design of the case study, as will be shown.

3.3.2 The form of case study used

Different types of case study have been identified. Stake (2000) distinguishes between intrinsic, characterised by interest in the case for its own sake, and instrumental, seeking insight into an issue. Meanwhile Yin (2009) categorises differing approaches as exploratory, descriptive or explanatory, partly depending on the phase of research. Synthesising

these two models, this study goes beyond mere intrinsic interest or illustration, often seen as a weak position (Silverman, 2010; Thomas, 2013), and instead seeks to offer insight with implications for action. It therefore may most closely be considered, in Stake's terms, an instrumental study, focusing not only on the subject of the study, but on an object, or issue. While potentially providing clarity, such typology may be limiting, as a single study may have a number of functions. In this case, there may be an element of description, as a rich picture was built up of participants' views and experiences. However, without necessarily establishing direct causation, the underlying aim was also to seek to explain how those views were related to changing experiences.

Stake (1995) stresses that the instrumental study has as its prime interest the issues bound up with the case and certainly this study used the case as a means to gaining insight into a broader phenomenon within ITE, a point echoed by Bassey (1999). This, however, raises the question of the extent to which these issues are pre-defined, bearing in mind the constructivist leanings of the study. Yin (2009), for example, takes the use of 'issues' further, advocating the creation of 'propositions' at the outset of a study as a way of guiding the research; Baxter & Jack (2008) equate such propositions to hypotheses in experimental research. This, however, suggests a rather positivist view of research which would seem to limit the authentic, inductive exploration of participants' views. While the emulation of scientific method was not in keeping with the nature of this study, it was clear nonetheless that when researching one's own practice some early assumptions are unavoidable and as part of a reflexive stance, this must be acknowledged. As a compromise, a set of loose propositions were therefore identified early on as a means of guiding enquiry in what might otherwise be a vast, loosely bounded field (see lines of enquiry in Table 2.2, page 54). These themes, however, were not used rigidly to guide the data analysis, which was conducted in a largely inductive fashion.

3.3.3 The case itself: sampling considerations

Having settled on a theory-building case study as the most appropriate approach, the question of defining the case itself or the unit of one (Silverman, 2010) emerged as a priority. Stake (2000) identifies specificity and boundedness as key criteria for a case and Yin (2009) advises clarity about this unit of analysis and how what is within can be distinguished from what is without. Seeking insight into PGCE students' views potentially allowed for various responses to this question, ranging from a single student to a whole cohort. Ultimately, the sampling strategy was influenced by Stake's approach to the study of Chicago schools (Stake, 1995). Stake began by focusing on one school that was interesting and accessible and then successively selected schools that were dissimilar, providing counterpoints to one another. He thereby set out to construct a group not representing the totality of Chicago schools, but offering the greatest potential insight into the issues.

Guided, therefore, by Stake's view that 'The first criterion should be to maximise what we can learn.' (Stake, 1995, p.4), I sought, through this form of purposive sampling, a small group of students to constitute the case. Rather than seeking to be representative in the scientific sense, the group was to reflect the diversity of the PGCE cohort. Based upon the typology of sampling strategies suggested by Miles & Huberman (1994) this fitted most closely with a stratified, purposeful approach, acknowledging subgroups within the cohort. The subgroups of interest were determined through discussion with the PGCE Programme Leader and examination of admissions profiles. From this, various dimensions of difference within the cohort emerged, including gender, age, prior experience, place of previous study and chosen PGCE age-related route (Appendix 3.1).

Volunteers were initially sought following an explanation of the proposed project and ethical implications at a pre-induction event in the summer preceding enrolment. I was looking for a sample group that would reflect and give voice to the dimensions identified and I eventually determined

that using five of the 29 volunteers would fulfil this requirement. Nevertheless, not every dimension could be reflected: no students from BME backgrounds volunteered, for example. Returning to the idea of a tightly defined case, Miles & Huberman's (1994) dimensions for 'bounding the territory' (p. 25), adapted in Table 3.1, provide a useful framework:

Dimension	This study
Conceptual nature	Student teachers sharing conceptions of theory and practice
Social size	Five students from same PGCE cohort
Physical location	The university and its partnership schools
Temporal extent	From July 2011 to October 2012

Table 3.1: The boundaries of the case, adapted from Miles & Huberman (1994)

It should be acknowledged, however, that the need to select students prior to the course (in order to collect data on preconceptions) meant that many other potentially important factors, such as parenthood, having family members in the teaching profession and level of competence in the classroom were largely unknown at this stage.

A further sampling consideration arising from the use of five participants was whether to approach this as a multiple case study or as a single case group. Yin (2003) advocates the use of multiple cases wherever possible but this is based on concerns for replication, which again suggests a more positivist outlook. Notwithstanding this, Stake (2006) also discusses the way in which cross-case analysis can enable consideration of both similarities within what he calls the 'quintain' and simultaneously the uniqueness of individual cases. Despite the potential interest in exploring cases in this way, the decision to treat the group as a single unit of analysis was informed by revisiting the original research aim. Following the rationale of an instrumental study as a means of gaining insight into issues, the overarching interest was not in the stories of these five

individuals, but in the way that PGCE students more generally might conceive of the relationship between theory and practice at various stages of their journey. Focusing on individual narratives and attempting comparisons between different types of student, while undoubtedly interesting, risked compromising the aims of this study.

Nevertheless, the interpretivist foundations of the study do indicate an interest in the authentic representation of participants' voices and it was important to anticipate that there might be differences and a lack of consensus within the group at times. A response to this potential tension was to think of the case in Yin's (2009) terms as an 'embedded' single case, in which attention is also given to subunits. In taking this approach, however, Yin cautions against focusing excessively on the subunits, as there is a danger that the original case becomes merely a context. While allowance was made, therefore, for acknowledging individual perspectives through the analysis, a tight focus was maintained on issues arising from the case group as a whole.

3.3.4 The issues of a longitudinal design

As well as strongly suggesting a case study approach, the research question necessitated the use of a diachronic, longitudinal design. While generally favouring the study of multiple cases, Yin (2009) acknowledges that longitudinal studies provide a good rationale for the study of a single case. Various forms of longitudinal design are possible and the research in question could be categorised as a prospective cohort study (Elliott, Holland & Thomson, 2008; Bryman, 2008). The decision to capture conceptions at points through the process, rather than just retrospectively afterwards, seemed to offer a more authentic view. As Smith (2004) explains, the interest in a longitudinal study tends to be in the dynamics of change over time but, whereas quantitative studies tend to focus on identifying and explaining who or what changes, qualitative researchers are usually more interested in how and why any changes take place.

Certainly, stepping beyond superficial description to explore reasons for participants' developing conceptions was one of the key aims, but also challenges, of this study.

One inherent methodological issue relating to sampling is attrition through participants' withdrawal. Various measures can be taken in order to minimise this risk. Smith (2004) recommends over-sampling at the outset to allow for some loss and Elliott, *et al.* (2008) suggest strategies such as keeping in touch regularly and careful collecting and updating of contact details. The decision to use the group as a case, rather than to focus on multiple individual studies, helped to guard against this eventuality as, even with the loss of one participant, a viable case unit might remain. Restricting the study to a cohort on one PGCE course also helped to maintain close links. Ultimately, however, as recognised by Elliott *et al.* (2008), the most powerful means of retention is the cultivation of good relationships and trust. As a tutor on the course, I was known to the students and care was taken to communicate frequently, sensitively and reliably, feeding back updates on the study and sharing details of the ongoing dissemination process. Unlike some wider ranging longitudinal studies, this piece of research had clear temporal boundaries and so a clear vision of the commitment required and purpose of the data collection could be conveyed from the very start.

In this instance, the data collection spanned the period from July 2011 to October 2012. Unlike most other recent studies of student teacher development, which have begun early in the training process (Hobson *et al.*, 2008; Tok, 2011), this allowed the capture of participants' preconceptions prior to beginning the course. Following these participants from this starting point through various moments in their training and culminating in data collected in their first term as NQTs required careful planning. Pirrie & Macleod (2010), using the metaphor of walking, argue for research conducted as wayfaring rather than travelling. In this view, in contrast to more sanitised accounts of research, unforeseen deviations and even obstacles are embraced as the means to valid insights in their

own right; an attitude of attentiveness and heightened awareness can be cultivated. However, while there is much to be said for a high level of responsiveness and reflexivity, the logistical and ethical constraints of researching one's own practice, the need to preserve the quality of course provision and seeking sustained participation from busy students all meant that a degree of structure was appropriate. The previously mentioned propositions contributed to this, as did the implementation of a coherent research design.

3.4 The research design

The hallmark of case study is the examination of a natural setting in depth (Bassey, 1999). In this study, a particular challenge was evident as the aim was to explore students' conceptions of a phenomenon: the relationship between theory and practice in their learning. Hopwood (2004), faced with a similar aim, makes the point that conceptions are not only multi-dimensional, but also largely hidden: they cannot be directly observed. Teachers may be unable to articulate the thinking that underpins their teaching and some of this knowledge is likely to be tacit and intuitive (Brown & McIntyre, 1993; Atkinson, 2000). For this reason, it was important to offer participants a range of opportunities, varied in both contextual and temporal terms, to share their views. This form of methodological triangulation is very much in keeping with case study, as Yin (2003) states that the complexity of case study research necessitates the use of multiple data sources. Indeed, the metaphor of the puzzle has been used to explain how different sources combine to illuminate the issue in question (Baxter & Jack, 2008; Silverman, 2010).

Most of the data collected were qualitative, aimed at a non-interventionist understanding of a complex issue (Stake, 1995). A clear data collection plan for the year was created at the outset in order to maximise the limited opportunities for interaction with this cohort as well as, in ethical terms,

minimising inconvenience for participants and offering a degree of certainty about the commitment requested. Although the main aim was insight generated from in-depth work with the case group of five, there were opportunities also to seek data from the wider cohort of some ninety PGCE students. While somewhat peripheral to the main study, discovering the extent to which the case group reflected the wider cohort was a potentially useful form of validation. In a similar way, early dissemination, during the research process, to ITE colleagues, which is discussed in a subsequent chapter, offered another 'external' view on the emerging claims.

A further consideration when structuring the research was that the longitudinal nature of the study effectively created an ongoing conversation between researcher and participants. While there may be advantages through the development of mutual understanding, Hopwood (2004) warns that participants can easily become frustrated and bored if the process is repetitive. This added weight to the decision to use a variety of sources and questions, rather than a strictly 'like for like' comparative approach to track changes over time. Another dilemma concerned the extent to which one phase of data collection informed the next. Miles & Huberman (1994) are among those who advocate an ongoing, iterative approach to analysis and indeed this does allow for an increasingly responsive relationship, as emerging points of interest can be probed further. However, a tension then arises when trying to represent participants' views: the process inevitably becomes increasingly researcher-led (Flowers, 2008), as data collection is based on a subjective selection of issues to pursue, rather than the open-minded, inductive approach which I also hoped to preserve.

Although the advantages of ongoing analysis outweighed this concern, it was nevertheless important to build in a counterbalance. In order to contribute towards respondent validation, any transcripts were sent to participants, but the timing of this was carefully planned. Transcripts from one phase of data collection were sent immediately before the next, partly

as a way of linking up the process by reminding students of their last contribution, but also to re-establish the prominence of the participants' own words. Flowers (2008) also recommends taking analysis, as well as the raw data, back to participants for validation. Inspired by this, broad emerging themes were shared with participants in this study before the final phase of data collection. This gave them the opportunity to clarify, refine or refute these tentative claims. Although mindful of the warning from Cohen *et al.* (2011) not to 'change the rules of the game in midstream' (p.115), Lincoln & Guba (1985) see an element of emergent design as characteristic of naturalistic research. I was inspired by the approach taken by Hodson *et al.* (2012) who suggest that recording participant discussion about previous analysis can be a valuable new source of data in itself. Seeking to capitalise on the opportunity, I decided, therefore, to organise this validation as an additional focus group discussion and to ask for permission to this to be recorded as additional data.

The interrelationship of the different sources of data is shown in Figure 3.1. As can be seen, the main case group data comprises three layers: the central data from interviews and focus group; a second layer of diary entries, providing views constructed over time and not face-to-face and finally two documentary sources not originally constructed for the purposes of the study and therefore not influenced by the research process. These core data are complemented by sources representing the views of the wider cohort (shown outside the main box), which offered a degree of triangulation. In order to test and refine this research design, a short pilot study was carried out.

3.5 The pilot study

Pilot studies serve a number of purposes. Gudmundsdottir & Brock-Utne (2010) argue that they are under-used in qualitative research and that the access to and understanding of a setting involved is in itself a form of action research. In this study, arising as it did from my everyday practice, access was not the major issue. Yin's (2009) emphasis on piloting in order to refine the content and procedures to be used was of most relevance: piloting allowed me to maximise the validity of the data by testing the lines of enquiry and specific questions. Additionally, Kvale & Brinkmann's (2009) focus on a researcher's qualifications were also pertinent. As my data collection was temporally bound by the journey of a particular cohort, it was equally important to ensure my own readiness. To this, I would further add the need to determine, as an ethical consideration, appropriate moments, locations and protocols for data collection that would minimise the disruption to a highly intensive programme of study. The beginning of the piloting process was an informal discussion with a small group of students on the final day of their programme in 2010. This enabled me to ascertain how much involvement would be reasonable to expect and at which points in the year: important practical and ethical considerations. Following this, five volunteers from the next PGCE cohort (2010-11) were recruited, reflecting, in terms of gender and previous experiences, some aspects of the diversity I hoped to capture in the main study's case group. All five took part in a focus group, three completed reflective diary entries and various interviews were conducted with two. Additionally, 78 students completed a questionnaire to be used for triangulation. This process enabled the feasibility of working with this number of participants to be established.

A number of issues relating to the specific nature of the study required consideration at this point. Firstly, it seemed especially important to trial the initial interview with an authentic pre-course participant, but the pilot study students had begun the course already and I was wary of using anyone from the forthcoming cohort, as this might rule out participants for the main study. As a solution, an extra participant, who was about to begin the somewhat

equivalent Graduate Teacher Programme (GTP), was used for this task. Secondly, as the main study was to centre on developments over time, I ensured that I tracked one PGCE volunteer through each of the three interview stages. Although this was over a four, rather than fifteen, month period, this allowed a rehearsal of the ongoing 'conversation', the inductive process of data analysis and the construction of a case.

Each stage of the process, from sampling through to data collection, transcription, analysis and reporting was trialled, therefore. The specific adaptations made to the main study are documented in subsequent sections but a summary of the methods piloted is presented in Table 3.2.

Method	Piloting activity
Interview 1	Two students interviewed; both interviews transcribed and analysed
Interview 2	One student interviewed; interviews transcribed and analysed: May 2011
Interview 3	Two students interviewed; one interview transcribed and analysed: June 2011
Focus group	Five students gathered; discussion recorded; transcribed and analysed: April 2011
Reflective diaries	Three students completed diaries: May 2011
Cohort questionnaire	Seventy-eight responses received; results analysed: Feb 2011
Other documents	Data pre-existed, so no piloting of collection, but analysis practised beforehand: Feb 2012

Table 3.2: Summary of piloting activities

As well as allowing me to refine the methods to be used, this process generated some tentative outcomes, albeit based on limited data. These helped to guide further reading, to focus attention on pertinent themes during data analysis and to rehearse aspects of dissemination, itself an important part of the piloting process (see Appendix 3.2 for a summary of pilot findings).

Finally, due to my close involvement with the students, it was important to gauge the extent to which my coding of emergent themes would be appropriate and not overly subject to any bias. To this end, the colleague collaborating as a critical friend undertook a parallel coding of a transcript arising from the first interview stage of the main study. While corroborating my coding and analysis, she suggested giving greater weight to affective issues. This additional insight

was incorporated in my subsequent coding (see Appendix 3.3 for outcomes of joint coding exercise).

3.6 Data collection methods

3.6.1 Interviews

At the heart of the data was a series of three individual interviews with each participant, spanning the full thirteen month duration. The explicit interest in conceptions, rather than actions, seemed to rule out observation and, as Cohen *et al.* (2011) point out, interviews allow participants to share their interpretations of the world. Furthermore, in keeping with the constructivist epistemology of this study, interviewing allowed for negotiated, co-constructed data (Fontana & Frey, 2000). Of Kvale & Brinkmann's (2009) two metaphors for interview, it is not mining for buried materials, but the jointly undertaken, transformative journey that seems most fitting. However, it must be acknowledged that, at best, this would elicit espoused theories (Argyris & Schön, 1974), presented for public consumption.

A fundamental decision when interviewing is the degree of structure used. Initially, a reasonably unstructured approach was considered, as this would offer scope for participants' views to be shared without the imposition of *a priori* structures or preconceptions. However, early piloting made clear the difficulty of uncovering student conceptions of what is a fairly abstract issue: enabling teachers, or prospective teachers, to give voice to conceptions about teaching presents a well-documented challenge (Brown & McIntyre, 1993). The decision to regard the group, as opposed to five individuals, as the case, together with the longitudinal interest in development over time, also suggested that some standardisation may be appropriate.

In searching for a suitable semi-structured approach, it was noted that a similar study of ITE students' perceptions (Hobson *et al.*, 2003) had used a technique

known as ‘hierarchical focusing’. This approach was first outlined by Tomlinson (1989) and involves the careful creation of a hierarchical agenda of domains and subdomains, from very broad topics to more specific points, sometimes represented as a tree diagram. The underlying principle is that the researcher prompts as little as possible, aiming for a spontaneous elicitation of views, but that coverage of key issues can be ensured by using lower levels of the hierarchy as a checklist when needed. The most specific prompts are resorted to only if these topics have not been touched upon through higher level, more open questions. Although this approach offered the desired compromise between structure and openness, it was, by Tomlinson’s own admission, a complex procedure to administer if an open-ended quality was to be maintained.

Piloting this form of interview with two participants was valuable practice, leading, for example, to the realisation that more open-ended prompts were needed. This process also resulted in other amendments. Printed cards to represent the broad ‘top level’ questions were introduced to help participants recall and explore the overarching issues openly with minimal prompting and the questions in the final section were adapted in order to give more purposeful answers. The final structure of the interview schedule (see Appendix 3.4 for an example from Interview One) also sought to reflect the ‘funnel shaped interview’ (Kvale & Brinkman, 2009, p.130), beginning with an ice-breaker and moving from the general to the specific. While adhering to this common approach, the three interview phases also had distinctive features, summarised in Table 3.3 below.

Time	Location	Characteristics	Adaptations following piloting
Pre course (early Sept 2011)	University	• No use of ‘theory’ as a term • Four broad questions only, to keep initial responses open	• Q4 changed to focus on links between school and university, as more closely related to research aims • More use of open

		• Focusing on personal route to teaching and expectations of course	prompts to elicit further detail • Cards provided showing the four main questions, as a further prompt
End April / early May 2012	Second placement school	• First questions based on stimulus of placement context • Probing previous responses • Discussing the nature of theory, as previously defined by the group	• Prior warning given of lines of questioning • Seeking a quiet and private space
End Sept / early Oct 2012	School where employed as NQT	• Use of 'graph' as stimulus • Retrospectively discussing development	• Enlarge graph and allow more interaction with this during the process • A greater emphasis on critical incidents

Table 3.3: A summary of the three interview phases

The earliest interviews, immediately before the PGCE course began, provided an important benchmark and were intended to uncover preconceptions and views relatively untainted by the ITE experience. For this reason, participants were not given advance warning of the specific lines of questioning. While this went some way towards promoting a more spontaneous response, it was discovered through piloting that skilled prompts were required in order to enable participants to articulate their thinking. These were complex issues that may not have been considered before and rapport and trust had not yet been established.

The quest for preconceptions that were as genuine as possible also presented a dilemma over the use of terminology. Pring (2004) is among those who highlight the powerful and possibly emotive connotations of the word 'theory' in education, Thomas (2007) discusses the wide range of ideas covered by the term and Calderhead & Shorrock (1997) remark on the over-simplified association of theory with university and practice with school. When using this

word in early interviews, therefore, establishing a shared understanding of the term at the outset, originating with the participants themselves, seemed particularly important. However, any overt discussion about 'theory' and 'practice' risked establishing a dichotomy in students' minds where none may previously have existed, as noted by Smith & Hodson (2010) in their comparable study.

With this in mind, a bold decision was taken to avoid the term 'theory' altogether at this stage. A precedent for this exists in the work of Laursen (2007) who took this approach when exploring students' conceptions of theory, in order to get beneath the familiar clichés and stereotypes potentially triggered when faced with these terms. Like Laursen's research, the strategy centred on broad opening questions about the essence of learning to teach, in this case categorised around *what*, *where* and *how* the participants expected to learn. Although the term 'theory' was to be introduced in a negotiated form at a later stage of the research, its absence at the outset could have raised issues of construct validity (Cohen *et al.*, 2011). It was important, therefore, to ensure that questions in the second and third stages of the hierarchy, beyond the initial open prompts, addressed the nature of theory more directly, but using concepts firmly grounded in the literature. Figure 3.2 provides examples of the way in which questioning was carefully derived from a range of sources and sought to address various facets of theory. To take two examples, the supplementary question on whether teachers need a specific body of knowledge can be traced to Eraut's (2007b) model of codified knowledge and the question about knowledge that goes beyond a single school setting relates to ideas of generalisability (McIntyre, 1993).

Figure 3.2: Questioning about theory: the basis in literature

In keeping with the desire for a rich variety of data, the second interview phase took place in school, rather than university, and had two main objectives, in addition to continuing to chart developing conceptions. Firstly, this interview allowed previous responses (by now generated by several data sources) to be probed further. The nature of theory, discussed at the focus group between Interviews One and Two, was one such topic. The group's shared definition was provided on a prompt card and a personal response solicited. Secondly, the school setting made possible an interview stimulated by a brief observed episode in the classroom.

Interviews based on a shared experience, such as an observed lesson, are advocated by Hagger *et al.* (2008) as a way of accessing students' thinking about teaching, rather than their espoused theories. While the observation was not used as a source of data itself, it was hoped that this immediate stimulus would help to offset the difficulty teachers find in articulating their decision making (Brown & McIntyre,1993). To this end, as a result of piloting, participants were also sent details of the broad lines of questioning as well as their previous interview transcript, so that a more considered response would

be possible. This relates loosely to the more formal device of 'stimulated recall', as used by Busse & Ferri (2003) in which participants offer an intermittent response or commentary to a film of their practice. As it was not the practice *per se*, but the more abstract concepts of 'theory' and 'practice' that were the real focus, this in-depth analysis of a lesson itself was not considered necessary.

Interviews were scheduled for the end of a school day but the visit included some time with the participants in their classrooms, seeing them interact either formally, through a lesson, or informally with their pupils and, in some cases, their mentors. Brief field notes were made and reference to what had been seen was used to open the interview. Participants were also invited to use the teaching episode as a specific example when considering how their knowledge for teaching had developed. The questions asked in the second interview varied slightly according to participants' prior responses, a recognition of the unique experiences of each (Stake, 1995). However, in order to facilitate some tracking of views over time within the group as a whole, the same tripartite structure of 'what', 'where' and 'how' was maintained for all. The difficulty encountered during piloting and never fully resolved, despite improved briefing, was the potential for interruption, particularly in small primary schools with no private space available. The sudden appearance of a mentor or head teacher, for example, could have compromised the frankness of students' responses to questions about placement experiences.

The third interview phase once again enabled further probing of emerging points, but with a retrospective slant. This phase was scheduled for the early weeks of life as an NQT in order to explore development before, during and after the PGCE course. Building once again on the constructivist underpinning of the study, there was a desire to ensure that the participants' active interpretation of their experiences was given high prominence. The approach taken was initially inspired by Orland's (2000) account of participants drawing lines in order to promote peer reflection about complex experiences. The act of drawing is claimed to promote introspection about often tacit issues, while the drawing itself then becomes a tool for discussion. Taking this further,

Meijer, de Graaf & Meirink (2011) formalise this device into a graph-like structure, with a horizontal axis representing the passage of time as a student teacher. This latter version is used in conjunction with semi-structured interviews as a means for discussing critical experiences. The use of the vertical axis, however, is somewhat vague, seeming variously to convey concepts such as motivation, enthusiasm, confidence and moments of learning.

For this study, this 'storyline' approach was adapted to give greater clarity and a closer match to the research question. The vertical axis was deemed to represent perceived relevance at any given point in time and participants were asked to draw two lines: one for theory and one for practice, in order to chart the interplay of these two elements (see Appendix 3.5 for example of completed graph). Reference was made to participants' own previous definitions in discussing these concepts. A further difference is that the line drawings themselves were not used as independent sources of data, but solely as stimuli for subsequent discussion. It was felt that the lines, viewed separately, could oversimplify what is a very complex question and, as acknowledged by Orland (2000) herself, could present a challenge for participants not familiar with this way of thinking. An additional consideration at this final stage was that this technique created a form of narrative. Convery (1999) cautions that teacher narratives create, rather than reveal, identities and that there is a tendency to be highly selective and even to conceal less creditable episodes. Researchers, he suggests, should attempt to 'destabilise' any single interpretations of experiences, through sensitive confrontation and deconstruction. The research design, with its multiple data sources and series of encounters over time, allowing for probing of themes should have largely overcome this issue: this final retrospective account could be triangulated against earlier responses. Although this series of interviews, as a means of accessing students' conceptions, were central to the study, the data were complemented by the use of a focus group involving the case participants and therefore dictated by the prior purposive sampling for the case group itself.

3.6.2 Focus group

The rationale for the use of a focus group was threefold. Firstly, this allowed greater insight into the co-construction of meaning and Barbour (2005) advocates the use of focus groups to reach these difficult to access issues. From a social constructivist perspective, the development of conceptions about, for example, theory is dynamic and socially negotiated (Flick, 2009). Indeed, Laursen (2007), in a study of student teachers' views on theory and practice, argues that a group expression of views on such concepts is more valid than individual ones, as it better reflects the joint construction of these ideas. Laursen, however, seems to adopt a group interview approach. It is important to make a distinction, emphasised by Parker & Tritter (2006), between this and a focus group, in which the participants largely discuss issues with one another, rather than the interviewer, and in which the object of interest is, to a great extent, the interaction itself. Morgan (1988) points out that, in terms of validity, a focus group is an artificial situation. Nevertheless, the specific episodes of peer interaction around key concepts such as theory were of intrinsic significance in this study and merited their own separate analysis.

Since the group was the case unit, a further motivation was the desire to bring the participants together as a means of exploring shared understanding. In doing so, however, it was important to be mindful of the tendency of groups to emphasise consensus (Barbour, 2005) and individual views deviating from the whole were carefully listened for. By triangulating views within this context with those expressed individually, any discrepancies could be identified. As Flick (2009) suggests, coming together as group can also allow for instant validation of views expressed, although this is likely to be more valuable in comments based on events and experiences, rather than abstract conceptions.
Finally, the convening of a focus group served an ethical purpose. The opportunity to interact and reflect with peers in making sense of experiences related to the need for these students to develop as reflective practitioners and thereby offered a potential benefit to participants. Kamberelis and Dimitriados

(2005) take this a step further by asserting that this is in keeping with an emancipatory or critical pedagogy, which emphasises the transformative power of research conducted with, rather than on, volunteers. While the political consciousness-raising is less of an issue here, there is an intention on the PGCE programme to develop thoughtful teachers capable of questioning assumptions and, ideally, moving their future practice forward through self-study. In this sense, the group discussion about fundamental aspects of teaching could be seen as an enhancement.

In organisational terms, the timing of the event was significant, as a sense of shared understanding was useful relatively early on in the process, but being able to draw on school, as well as university, experience was felt to be valuable. Through piloting, a sense of especially busy times to avoid had been considered and the focus group took place immediately after the first school placement, in December 2011. As recommended by Breen (2006), careful preparation took place beforehand in terms of briefing, booking a suitable location and organising audio and video recording equipment. Video recording was particularly valuable, despite the potential for self-consciousness on the part of participants, as it enabled clear identification of speakers afterwards and the compiling of notes on body language and non-verbal participation.

Cohen *et al.* (2011) emphasise the skill required to facilitate focus groups and Flick (2009) sees three categories of moderator role: formal direction; steering or introducing topics and steering the dynamics. Of these, the third seemed to require the most subtlety and practice and was refined through piloting practice. The piloting process, with five of the previous year's PGCE students, while successful, also resulted in the changing of one question, which had led to a largely irrelevant discussion and, above all, the awareness that a rigid order of questions was not appropriate if the flow was to be maintained (see Appendix 3.6 for schedule). An example of this concerned the need to discover more about the group's conception of the nature of theory, with a view to creating a shared definition that could be used thereafter. In keeping with the intention to avoid imposing preconceived ideas on the group, I held back the prompt for exploration of this idea until the point at which the term 'theory'

had been spontaneously introduced by the participants. The overall sequence recommended by Finch & Lewis (2003) was largely adhered to, moving from scene setting and introductions, through an opening topic to the main discussion points and then concluding with an open-ended prompt for any further thoughts.

Following the example reported by Hodson *et al.* (2012), an additional form of focus group discussion was the respondent validation meeting undertaken with four of the five participants in June 2012. In this case, four prompt cards representing my emerging interpretations of developments were used to promote brief discussion (see Appendix 3.7 for example of prompt). Though not filmed, the discussion was audio recorded and transcribed for analysis. As a source of data, this had a somewhat different status to others, as, due to its very nature, it was overtly led by my own views. This was used, therefore, merely to support and elaborate on substantive findings from elsewhere.

3.6.3 Documentary sources

Definitions of case study often place great emphasis on reflecting complexity (Stake, 1995) and depth (Bassey, 1999). Although triangulation in both temporal and locational terms was already evident through interviews, this suggested the additional value of methodological triangulation. Baxter & Jack (2008) go as far as to suggest that the use of multiple data sources, in order to contribute pieces to a puzzle, is one of the hallmarks of case study work. Simons' (1996) conception of case study as a holistic process, drawing on all the senses was also influential, as it was clear, particularly as an 'insider' and participant in the PGCE process, that an understanding of the case group should be developed from a number of angles.

Also significant was the inherent limitation of face-to-face forms of data collection. Fontana & Frey (2005) emphasise that interview is a collaborative exchange, rather than a neutral research tool. While this study embraced and benefited from this stance in many ways, my dual role of tutor and researcher

was likely to affect the tone of any such encounter. Bruner (1990) argues, furthermore, that the very act of interviewing, with its direct answers and interruptions, can be problematic: 'The human selves that emerge from our interviews become artificialised by our interviewing process.' (Bruner, 1990, p.115). Personal, written accounts of participants' development, were seen, therefore, as a way of allowing students time to respond in a more considered and possibly more natural way, to do so without the presence of the researcher and, crucially, to retain the initiative in terms of the structure of their response.

A set of reflective diary entries, capturing immediate responses to teaching episodes, was considered appropriate. However, mindful of the participants' considerable teaching commitments in school, the decision was taken, on pragmatic and ethical grounds, to restrict this to just two focused entries per student, one on each assessed placement, producing ten pieces in total, rather than a series of entries over time. This drew on the existing requirement within ITE, reified within the standards for QTS at the time (TDA, 2007a), for students to show evidence of development as reflective practitioners. During the piloting process, for the purposes of standardisation, participants were asked to select a lesson on a specified day. However, the vagaries of school timetabling meant that some entries were based on low-level teaching episodes less suited to this task. The final guidance, therefore, instructed participants to select a lesson within a given week which had been particularly successful, with the hope that this would encourage students to reflect on the reasons for this success.

Parsons & Stephenson (2005), using reflective school-based tasks as a data source for exploring students' development in a similar fashion, caution that spontaneous comments tend to be focused almost exclusively on immediate personal experience. With this in mind, a limited degree of structure was incorporated. Newton (2000), in a comparable study of student nurses' 'knowing in practice', offers a useful format of bullet points at the outset, which participants are invited to consider in their subsequent, freely structured response. A very similar approach was adopted and the prompts, refined through piloting, were intended to focus the students on underlying dilemmas

and decision-making without directing them explicitly to comment on specific sources (see Appendix 3.8 for guidance). Although the guidance for the first and second placements was almost identical, a slight development for the second entry was the invitation to include any relevant attachment such as lesson plans or children's work. This was inspired in part by Thomson & Holland (2005) who discuss the use of 'memory books', an enhanced form of diary containing artefacts chosen by the participant, as a way of moving beyond text and offering a more holistic view. As well as providing valuable contextual information, it was hoped that the very items selected might shed light on the participants' priorities and thought processes, though, in the event, participants made little use of this opportunity.

Andrews, Squire & Tamboukou (2008), while advocating narrative research as a means of exploring individual representations of phenomena, also make the point that narratives are shaped by the audience for which they are created. In this sense, while offering participants an alternative format, the reflective writing nevertheless remained, like the interviews and focus group, a representation constructed explicitly for the researcher and for the sole purpose of the study. Silverman (2013) makes a plea for the use of non-manufactured, naturally occurring qualitative data. As the focus of the study was on conceptions held by participants, most opportunities for this, such as observations of everyday practice, were unlikely to yield new insights. However, I felt it important to triangulate the consciously research-oriented data with other relevant sources. For this reason, two further documentary sources were used.

As part of the assessment for the PGCE course, an essay, requiring an evaluation of reflective practice integrating placement experiences and academic literature, was written by each participant. Asking for permission to use this as a source only after it had already been submitted and marked ensured that it was not written with the research study in mind and so this potentially offered a different perspective on student thinking. Ryan (2003) also uses ITE students' coursework as a way of gaining insight into their learning as teachers but takes a wide-ranging approach to this, using a variety

of material from school placement files. In contrast, this essay was chosen very deliberately, as it required students to chart their personal development by combining theory with anecdotes from practice, thereby linking very closely to the focus of the study. A final source, for which permission was once again secured later in the process from four out of five participants, was each student's personal statement from the admissions process. I saw this as offering a small additional insight, albeit highly artificial and quite possibly co-authored, into early preconceptions. Although both sources were constructed for specific audiences (marking tutors and admissions tutors respectively), this was not done with the research in mind. This was seen as one way of mitigating the issues, also acknowledged by Smith & Hodson (2012) inherent in working with participants as researcher and tutor simultaneously, which are discussed more fully in section 3.7.3 (p.90).

The use of these contrasting written sources reflects the distinction made by Charmaz (2006) between elicited and extant textual sources and the importance of acknowledging the context within which extant sources were created. In the case of the essays, for example, one might expect students to establish links between theory and practice due to the expectations of academic writing and not necessarily because these were consciously considered at the time; in the case of the personal statements, candidates may offer an idealised portrayal of themselves and their vision of teaching. Both are artificial constructs created as the means to an end but nevertheless offering an alternative insight into conceptions of teaching. The nature of the sources also meant that not all of the content was pertinent to the study and so the analytical process had to begin with a search for relevant extracts, guided by the aforementioned lines of enquiry.

3.6.4 Whole cohort triangulation

In addition to the data collected from the case group, an attempt was made to contextualise this information with data collected from the cohort as a whole. Whilst acknowledging the value of studying the particular, I felt it worthwhile also to seek data from the other PGCE students, chiefly as a way of determining whether the case group's conceptions seemed to reflect those of their peers. As a large number of responses were anticipated, I decided to solicit simple, quantifiable data using a Likert scale from 'strongly agree' to 'strongly disagree'. Notwithstanding the inherent limitations of this approach, such as the lack of equal intervals on such a scale (Cohen *et al*, 2011), I hoped this would provide a like-for-like comparison at two points in the process and a basic form of triangulation with the case group data.

A structured ten item questionnaire was given to all students willing to participate (see Appendix 3.9). Piloting with a previous cohort had involved a trial of the instrument with 78 responses, as well as a participant evaluation. It was seen that greater clarity was needed for three of the questions and these were slightly adapted for the final version. Although there was an acknowledged risk associated with forcing participants into a decision, a four point scale with no middle value was used, as this data was not central to the case itself and I needed to gain a simple, but clear picture of the cohort's views. The final questionnaire was administered in July, before the course began and again, in the same form, on the final day. Mindful of the pitfalls cited by Cohen *et al.* (2011), such as bias, ambiguity and complexity, the items took the form of simple, single sentence statements. As with the first interview, the terms 'theory' and 'practice' were avoided and indicators of these concepts, grounded in the literature, were used instead. Statements, derived from themes from the literature, centred on key lines of enquiry: the nature of teacher knowledge, different forms of knowledge and the sources of this knowledge. The learning journey was not mentioned explicitly, as information on this was to be gleaned from the comparison of responses over time. Respondents did not identify themselves, as it was felt that anonymity might lead to increased candour and the interest was in a cohort view, rather than individual responses.

In addition to this, loose triangulating feedback from this wider cohort was sought at the midpoint of the course in the form of simple 'yes' or 'no' responses referring to whether they recognised twenty interim findings from the case group (see Appendix 3.10 for analysis and summary). These took the form of ten pairs of statements, each on a particular theme, one relating to pre-course views and one relating to current views at that time. This was used, not so much as a separate data source, but primarily to help with the analysis of the main body data, as it suggested the relative strength of the emerging claims and allowed for the questioning of some assumptions.

3.7 Enhancing the quality of the data

3.7.1 Principles for high quality data

During the study, steps were taken to establish what Miles & Huberman (1994, p.277) call 'standards for the quality of conclusions'. The question of what constitutes quality is a contested one, however. Yin (2009), for example, frames this in terms of logical tests and cites the four common criteria of construct validity, internal validity, external validity and reliability. This, however, presupposes an approach originating in positivist modes of research. Lincoln & Guba (1985) have been prominent in rejecting such measures as inappropriate for what they term naturalistic studies, proffering instead the idea of 'trustworthiness', broken into facets of confirmability, credibility, transferability and dependability. In short:

> *How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of?* (Lincoln & Guba, 1985, p. 290)

The reference here to convincing oneself is not insignificant: first and foremost, as the researcher, I need to be confident in the outcomes of what has been

undertaken. Only then should wider dissemination be considered, in line with my responsibility to the educational research community (BERA, 2011).

The inherent uniqueness of a case study illustrates the inadequacy of a simplistic quest for reliability, for example, in its traditionally understood sense of potential for replication. A more nuanced approach is clearly required. While the need for confidence in high quality research remains, it is perhaps more productive, as suggested by Flick (2009) to think in terms of strategies, rather than criteria, for quality assurance. To this end, the synthesis of approaches suggested by Miles & Huberman (1994) provides a useful framework. As well as incorporating the concepts from both positions above, their model goes a step further to consider also utilisation. The potential for change and impact on practice, so central to a professional doctoral study, is an equally important aspect of quality and worthiness. Table 3.4 summarises the main strategies in place under each of these headings.

Criteria from Miles & Huberman (1994)	Measures taken
Objectivity / confirmability	• Detail of procedures and research design provided • Acknowledgement of implications of dual role • Inductive approach to data collection • Initial assumptions shared with participants for validation
Reliability / Dependability / Auditability	• Definitions of 'theory' explored through the literature and incorporated into questioning • Peer review of coding with academic colleague • Clear structure to each phase of data collection (three consistent headings)
Internal validity / Credibility / Authenticity	• Triangulation of methods and across time • Claims substantiated by clear reference to items of data • Methods chosen to allow participants to share conceptions (as opposed to observation of practice) • Interviews transcribed verbatim, preserving participants' own words
External validity / Transferability / Fittingness	• Careful sampling to reflect diversity of cohort • Triangulation with wider cohort • Detailed description of sample and context, allowing others to judge similarities • 'Thick' description: detailed findings • Ongoing dissemination to gauge relevance to other ITE settings
Utilization / Application / Action orientation	• Study aims derived from prior knowledge of the field and literature • Implications for practice made explicit • Ongoing dissemination to allow early action as tentative findings emerge

Table 3.4: A summary of measures taken to enhance the quality of data in this study (adapted from Miles and Huberman, 1994)

While specific measures to ensure quality have been discussed alongside individual data collection methods, the nature of this study raised three particular over-arching issues that merit further consideration: reflexivity, relationships and generalisation.

3.7.2 Reflexivity

As a lone researcher employed within the research context, bias was a potential issue. Although a degree of subjectivity was accepted within the interpretive paradigm of the study, there remained a need to offer a perspective beyond the merely personal. Although some familiarity with the literature and practice in this field existed from the outset, the decision was made to analyse the data in an inductive fashion, thereby minimising the impact of any such prior knowledge. Nevertheless, the 'bracketing off' of my own preconceptions (Denscombe, 2007), proved difficult at times. Although I attempted to approach data collection and analysis in an inductive manner, it was hard to set aside the accumulated experience of several years spent engaging with these issues on a daily basis. An example of this arose in the final interview: I was aware of the wider political context shifting around the study and took the opportunity to ask participants about their views on increasingly school-based forms of training. Although this had relevance to the study, it clearly arose from my professional experience, rather than the participants' responses.

On a personal level, therefore, a reflexive stance was important, acknowledging the interdependence of the research account and research setting (Cohen *et al*., 2011). This is particularly pertinent for case study, in which the researcher is a major research instrument (Simons, 2009). Ryan (2003), in a study on the teaching of Primary Science, provides a useful example of such transparency, openly outlining his professional role in order to allow a clearer interpretation of his research. In the same way, it seems important to state my position. I have been working with PGCE students in

teacher education for seven years and was involved with the cohort in question in a number of ways: delivering a wide variety of taught sessions, assessing academic work and visiting students on school placements. Going beyond this, the research may also be coloured by other forms of self, such as my background as a teacher and former PGCE student and my current position as a learner seeking to link theory and practice in my own professional context. To account for this, a personal research diary was kept, as a means of recording and reflecting on possible tensions and developing ideas. The rationale for this was twofold: firstly to promote personal reflection on how my position may have influenced subsequent actions (Simons, 2009) and secondly to provide a source of data to accompany the findings so that my 'research lens' could eventually be made explicit to the reader at every stage (Yin, 2011).

3.7.3 Research relationships

Researching one's own practice in the dual role of researcher and tutor potentially presents further complications. The epistemological views underpinning this study were such that a true separation of researcher and researched was not sought: knowledge was to be co-constructed. Nevertheless, the relationship between researcher and participants in longitudinal qualitative research is subject to a particular tension. Pollard & Filer (1999) point out that the empathy and rapport generated through longitudinal work has real benefits for the researcher's understanding of a phenomenon, but Thomson & Holland (2003) warn that growing familiarity with participants could complicate an already complex role. It could be argued that insufficient objectivity is possible on this basis and indeed, Raffo & Hall (2006), in a comparable position, take the view that in order to develop 'authentic' research relationships, the involvement of another researcher, with no connections to the participants, is necessary. To this end, the productive working relationship with the colleague who had advised at piloting stage was continued, allowing, through regular meetings, for external validation of emerging claims.

The dual relationship with participants, as both researcher and tutor, could also compromise the honesty of responses. As Smith & Hodson (2010) note, tutors may be seen by students as the guardians of theory and therefore a reluctance to criticise the place of theory on the course might be expected. While this is certainly possible here, it does not take into account the tutor's additional role in the practice elements of the PGCE. I was also careful, in my prompts and questions, to avoid leading participants towards simplistic associations of theory with university (Calderhead & Shorrock,1997) or theory as separate from practice (Smith & Hodson, 2010). This was further addressed through the assurances of confidentiality, anonymity and the separation of roles negotiated at the outset and was also a consideration behind the decision to use documentary sources in which the researcher effect may have been lessened. Respondent validation also assumed a prominent role. As well as interview transcripts, the shared definition of theory was checked with each student. Initial assumptions were shared with four of the five participants at the end of the course, inviting not only validation, but also elaboration. Finally, a journal article disseminating the first phase of findings (Knight, 2013) was sent to all participants for comment some months after the course; three replied, expressing interest in what was written and no inaccuracies were mentioned.

Despite these measures, minor issues relating to the dual role did surface occasionally. For example, due to existing ITE relationships, negotiating access to schools for interviews was bound to draw on my role as a tutor as well as that of a researcher. It must also be recognised that participation in the study may have changed these students to a degree: the opportunity to engage in additional forms of reflection on practice with others is likely to constitute, however slightly, a 'transformative journey' (Kvale & Brinkmann, 2009) and it is possible that these students gained a heightened sense of awareness of their learning as a result of my questioning. Nevertheless, this concern is offset somewhat by the fact that participants' views were mirrored to a great extent by those of the wider cohort, who were responding anonymously. Furthermore, after training had finished and my role as their tutor had ceased, views remained consistent and, if anything, even more favourable towards the programme.

My fear of sample attrition over a long period of time proved unfounded. The only elements missing from the complete and wide-ranging set of data planned for were: one personal statement, one participant missing from the focus group and one student unable to attend the respondent validation discussion on the final day. The fact that these three omissions were from three different participants also means that no single voice is under-represented. Predictably, the number of wider cohort survey respondents varied at the three stages of data collection, with 87, 76 and 58 responses respectively. This, however, did not form part of the central case data and has been reported as a means of triangulating the five participants' views.

3.7.4 The potential for generalisation

Returning to the inherent tension between the unique and the universal, it was important to be clear about the wider inferences that could be made from the case study. In this instance, the purposive sampling strategy described was not based on an intention to generalise to a population, but rather to gain insight into an issue. This raises the question of whether any form of generalisation is possible in such a study. Onwuegbuzie & Leech (2007), in their typology of generalisations, refer to case-to-case transfer as one of these. While there is a degree of standardisation around ITE programmes, the direct transposing of the findings from this case group to a group of students elsewhere was not necessarily envisaged. Similarly, Bassey (1999) discusses 'fuzzy', or qualified, generalisations, based on the likelihood of similarities being found elsewhere. While this may be quite fitting for the case study researcher, persisting with any use of the term 'generalisation' at all may still have unhelpful connotations with the positivist viewpoint, when in fact no such claims are being made. Lincoln & Guba (1985), as one facet of 'trustworthiness', use the term 'transferability' in place of external validity or generalisation, emphasising that this cannot be determined by the researcher alone: each user of this research must determine how well insights transfer to their particular context. In light of this, a more appropriate stance is put

forward by Pring (2004), in rejecting what he calls the 'uniqueness fallacy' (p. 109). He asserts that, while case study indeed focuses on the particular:

> *The graphic descriptions may alert one to similar possibilities in other situations. They, as it were, ring bells.* (p.41)

There are enough similarities between 'unique' cases for emerging issues to have meaning more widely and a 'connective understanding' (Thomas, 2013, p.593) across situations is possible. This, therefore, was the aim: to offer insights, based on well-founded claims in order to develop tentative theory, which might allow fellow practitioners to consider their own settings in new ways. A further facet of quality in research and one that is inextricably bound up with the notion of trustworthiness is the question of ethics. In addition to ethical issues commonly encountered within education research, working with participants over a long period of time on an issue bound up with my practice presented further potential tensions to be resolved.

3.8 Ethical considerations

The data collection for the study entailed a careful consideration of ethics, but, as Pring (2004) points out, the fundamental concern is not one of rules, but of ethical principles. Furthermore, Stake (2000, p.447) reminds us that qualitative researchers are 'guests in the private spaces of the world.' Research in depth and over time with a small number of case study participants offers a privileged insight into their views and needs to be conducted with a high degree of propriety. As a basis for this judgement, two important codes were adhered to: The British Educational Research Association's latest guidelines (BERA, 2011) and the university's own policy (UREC, 2011). BERA's guidelines (2011) are notable for being couched in terms of responsibilities to various stakeholders and this sense of respect for others seemed especially relevant in a study in which I was delicately poised at the centre of an existing network of colleagues

and students. While such codes are a valuable starting point, it was important to see them as just this. As stated by Flick (2009), such guidelines cannot possibly address all the potential issues of qualitative research: an element of personal judgement was also needed. This point is reinforced by Rossman & Rallis (2010) who argue that the proceduralisation of ethics has actually diminished the attention given to the relational, human considerations.

Both codes understandably focus on the potentially detrimental aspects of research but underpinning this study was a desire also to offer participants positive experiences. Working with students who were required, within the then teaching standards, to develop a degree of reflective practice (TDA, 2007a), it was hoped that the data collection process in all its forms would help to foster this sort of thinking. Piloting had indicated, for example, that the focus group was a particularly useful, mutually supportive, discussion. Building on a line of thinking from Stenhouse's (1981) vision of teachers as researchers, reiterated in the recent Cambridge Primary Review (Alexander, 2010), there also seemed to be a strong argument for modelling the use of research in one's own educational practice. Looking more specifically at teacher education, Loughran (2006) has argued for the increased transparency from tutors about the dilemmas and uncertainties of practice. The implication is that, by laying bare such decision-making, students will be encouraged to question their own practice to a greater extent.

While all of the participants' activities were designed and conducted with these benefits in mind, the involvement of students in such research is not without its pitfalls. Hodson *et al.* (2012) report, for example, that a significant minority of their participants suggested that they would rather have spent their participation time learning more about practice. Although I was to offer feedback at the end, the value of research as learning, it seemed, may not always be clear to the student during the process. This was addressed explicitly when the project was first introduced to the whole cohort and volunteers sought by providing a list of potential benefits. Perhaps more significant, however, was the danger alluded to in BERA's (2011) guidelines of privileging one group over another. Partly with this in mind, as well as for its

triangulation benefits, the research was designed to include opportunities to engage with the whole cohort of PGCE students at three different points. The questionnaire used immediately before and after the course and the validation questions put to the cohort midway through the study were intended to allow all students to address the central research questions and to reflect on their own development. Furthermore, the relatively open form of questioning in all aspects of data collection meant that the case group was not directly led to any qualitatively different form of thinking, beyond that prompted by other opportunities on the course.

In considering the potential risks to participants, it quickly became apparent that the dual role of researcher and tutor was central to many of these issues and indeed BERA (2011) highlights this as being the source of particular difficulty. There was a constant awareness of the need for a clear demarcation of roles in any interaction with participants but, despite vigilance and openness in this respect, participants themselves occasionally crossed these boundaries. This point was highlighted during piloting when a participant, immediately before an interview, unexpectedly began to discuss a university admissions issue related to a family member. With this early incident in mind, the information provided at the start of the main study stressed very clearly the separation of the research from the PGCE course and conversations with participating students throughout the research period, however impromptu, were always verbally prefaced with an indication of the relevant role (researcher or tutor) at that moment.

An issue very much related to the duality of roles was that of gaining consent for the study. A commonly held principle, stressed by Simons (2009) and underlined also by other codes (ESRC, 2010) is that consent should be informed and given without coercion. The decision had already been taken that the earliest stage of data collection would avoid discussing theory and practice as two separate entities. As the complex relationship between the two, however, was the crux of the entire study, it was felt that omitting these terms at the initial consent stage and alluding only vaguely to student teacher learning may have constituted undue deception. Cohen *et al.* (2011) identify

deception as one of the difficulties of educational research that is subject to weighing the cost-benefit ratio. The decision was taken, therefore, to be open about the interest in theory at the outset in written consent materials, but to avoid drawing explicit attention to these 'problematic' terms thereafter. Consent was initially obtained, following a brief explanation of the study to the whole cohort, twice: all volunteering students returned a form indicating their interest, subject to the conditions outlined, and the sample chosen then signed a further consent letter (see Appendix 3.11). Consent for the use of the questionnaire by the wider group of students was secured in both cases through the voluntary return of the survey document, upon which were printed the relevant ethical details.

Although BERA (2011) refers only to initial consent, Simons (2009) argues that case study research involving an element of emergent design may necessitate securing consent more than once, depending on issues arising. An example of this was the additional request, partway through the study, for the use of the assessed essay as a piece of data. This is supported by Thomson & Holland (2003), reflecting specifically on longitudinal research, who argue that consent is always provisional. This provisional nature could be seen, in any case, to be implicit in the counterpart to consent: the right to withdraw. In many ways, it was this right which needed to be most carefully preserved. Simons (2009) makes the point that case study research centres on trust and the building of relationships. While this was a positive factor, a sense of obligation on the students' parts to see out the whole research process could easily be envisaged, due to the parallel student-tutor relationship. Although the research design, therefore, was almost entirely established and shared at the outset, the approach was very much guided by Miles and Huberman's (1994) view of consent as an ongoing process of negotiation: formal, written consent was obtained at the outset, but voluntary participation and the right to withdraw were reiterated before every new set of interviews.

Closely related to the right to withdraw was what BERA (2011, p.7) have termed 'bureaucratic burden'. It was essential that, on a course as intense and demanding as the PGCE, nothing was done to jeopardise the students'

progress through excessive further commitments. This consideration was prominent during the piloting phase and pilot participants were consulted about the timing and manner of the different elements of participation. This had an impact on a number of decisions, including the specific weeks chosen for the focus group and second interview, which were carefully timed to avoid, for example, tutor visits and assignment deadlines. A possibility that was anticipated but, fortunately, did not materialise was that of a failing student among the participants. Before commencing the main data collection, it was agreed with the PGCE programme leader that, should one of the participants find themselves in this position, withdrawing them from the study would be considered if seen as beneficial.

The dual tutor and researcher roles also heightened the issues of anonymity and confidentiality. Although the concepts are treated as almost synonymous in some ethical guidelines (BERA, 2011; UREC, 2011), Simons (2009) makes a persuasive case for their 'uncoupling' and separate consideration. Confidentiality in this case, for example, primarily involved establishing a clear boundary between using data for the purposes of research (which, far from being confidential, may be made public in some form) and responding to, or using this, in other ways related to the course. A clear distinction was also needed between the treatment and storage of course-related information held and shared in a limited way, legitimately through the role of tutor, and anything related to the study held as a researcher. Participants were assured of this verbally and on the initial written consent form. A clear shared understanding about what was on and off record was needed: in one instance it was discovered during Interview Two that the recorder had not been switched off properly and some potentially interesting additional comments had been inadvertently captured. Although permission to use this data could have been sought retrospectively, I made the judgement that this small benefit was outweighed by the need to maintain participants' confidence in the clear boundaries agreed. This unanticipated reflection and decision-making instance could be seen as an example of the reflexivity at an 'ethically charged moment' that Rossman & Rallis (2010, p. 385) call for.

As Simons (2009) suggests, decisions around anonymisation constitute a separate set of considerations and they centre on the data firmly within the research domain and the form in which it is stored and potentially made public. From the very outset, all participants were assigned a number, known only to the researcher, and all data stored were identified in this way only. Due to the early sampling discussions, the programme leader was aware of the identities of the participants but not of their code numbers. Within this report and most dissemination materials, pseudonyms have been used. Ideally, therefore, no comments within the reported data would be attributable to individuals. The reality, however, is more complex and Miles & Huberman (1994) question whether anonymity is really possible within a case study which may be read by those close to the case itself. In this study, once any mention of placement schools had also been anonymised, working out the provenance of specific comments was felt to be highly unlikely, even among my colleagues. Nevertheless, the suggestion by Miles & Huberman (1994) to ensure that participants understand the form in which the case will be made public was seen as an important safeguard and a final element of ongoing negotiation of consent. This was therefore discussed as part of the preamble to Interview Three. Anonymity extended to the storage of the data, such as transcripts and audio files, which were on password protected computers accessible only by me and which did not include participants' names in any form, written or spoken. Names were recorded only on hard copies of consent forms, which were stored securely and separately.

A final set of ethical considerations involved looking beyond the participants and returning to BERA's (2011) notion of responsibility to the sponsors of research and the community of educational researchers. In one regard, this aligns with Miles & Huberman's (1994) criteria of worthiness and competence or Flick's (2009) of scientific quality. It was important to establish through the early stages of surveying existing research and piloting methods both that the study had the potential to add to the literature in the field and that the research could be carried out with sufficient rigour. However, it could also be argued that responsibility to sponsors, in the sense of facilitators, extended to colleagues at the HEI. While advocating open exploration with students of the

uncertainties of one's practice, Berry (2008) also acknowledges the danger of undermining the perception of the tutor as 'expert'. The purpose of the study therefore had to be clearly articulated to avoid damaging students' confidence in what was considered, through various forms of external validation, a highly successful programme. The research was publicly positioned from the outset as part of an ongoing attempt to improve practice through self-study and to examine the PGCE experience from a new angle.

3.9 Data analysis

3.9.1 Underlying principles

To reiterate, the key lines of enquiry were:

1. What constitutes teachers' knowledge?
2. What is nature and role of theory in education?
3. What is learned in school and how?
4. What is learned at university and how?
5. What is the learning journey and how does student thinking develop?
6. How does learning link and make sense?

The approach to the analysis of data, whether in the form of transcripts or documentary sources, was firmly rooted in the epistemological view of the students as active participants, co-constructing knowledge. It was important, therefore, to preserve the participants' voices as far as possible and to avoid 'forcing' the data in preconceived directions. In common with the phenomenological aim of approaching data in an open-minded manner (Smith, Flowers & Larkin, 2009), the intention was to explore the students' journey with minimal imposition of outside assumptions.

As Gibbs (2007) points out, however, this 'bracketing off' is often an unrealistic ambition. In this case, experience with previous PGCE cohorts, including the

piloting of the study with students the year before, was bound to have an impact. The very nature of a professional doctorate also militates against such objectivity, particularly in the case of the 'second generation' of professional doctorates (Lester, 2004) which are characterised by researchers investigating their own practice. For example, the selection of a meaningful question, worthy of research, is based to large extent on a detailed knowledge of the professional context. The lines of enquiry summarised above make it clear that this was no *tabula rasa* but these were not used as *a priori* themes for analysis. While much of the analytical approach shares characteristics with qualitative forms of content analysis, as outlined by Krippendorff (2004), the absence of pre-established categories represented a degree of divergence from conventional content analysis practice (Flick, 2009).

Through an inductive approach towards theory building, the analysis sought to establish themes arising from the data, through repeated close reading and comparison of sources and the aim was to give voice to the construction of meaning by participants. The eventual procedure avoided slavishly following a single method, but was closely modelled on a so-called 'general inductive approach' synthesised by Thomas (2006). As Hopwood (2004) points out, analytical procedures need to be adapted according to the needs of the individual study. Nevertheless, Miles & Huberman (1994), while agreeing that there are no standardised approaches, offer three key steps which served as guiding principles: data reduction, data display and conclusion drawing and verification. In practice, these were not sequential steps, but overlapping and simultaneous: tentative conclusion drawing began early in the process, for example. Table 3.5 summarises the data analysis process.

<table>
<tr><th></th><th colspan="2">Data Reduction</th><th>Data display</th><th>Conclusion drawing</th></tr>
<tr><td rowspan="2">Stage One:

Analysis of individual data sources</td><td>Interview transcripts and documentary sources (qualitative data)</td><td>Data presented a text: Transcription of interviews; collation of documentary sources

Coding at three levels:
Organisation into 3 pre-existing overarching themes (what, where, how)
Identification and coding of emergent themes
Identification of sub-headings within each code</td><td>Coding schemes (Appendix 3.13)

Summary charts of claims and evidence base (Appendix 3.15)

Selection of important quotations</td><td rowspan="3">Constant re-reading of data to verify emergent themes

Early dissemination to ITE colleagues to verify relevance and clarity of emergent themes</td></tr>
<tr><td>Questionnaires (quantitative data)</td><td>Collection of questionnaires

Calculation of frequencies, means and standard deviations</td><td>Ranking and comparison of questionnaire statements (Table 4.2)</td></tr>
<tr><td>Stage Two:

Meta-analysis of whole data set</td><td colspan="2">Gathering emergent themes from all sources:
Analysis of patterns within 4 time phases
Analysis of longitudinal development across 4 time phases</td><td>Matrices (Appendix 3.17)

Network diagrams (Appendix 3.18)</td></tr>
</table>

Table 3.5: Framework for data analysis

3.9.2 Management and initial analysis of individual sets of data

Thomas (2006), setting out his sequence of steps for inductive analysis, begins with close reading of the text but does not elaborate on what this text might be. In practice, the means of documenting participants' responses involves important decision making. Stake (1995) questions the need for interview transcripts in case study research, suggesting that meaning, rather than exact words, is what is crucial and that participants may actively dislike reading their own transcripts. Although, as Flick (2009) argues, any transcript is already slightly removed from reality and over-elaborate protocols risk further

obscuring the data, it seemed important in a study looking closely at students' conceptions to preserve the students' own words.

Verbatim transcripts based on digital recordings of the interviews and focus group were therefore produced. While representing the participants' exact words, verbal tics were removed, a degree of tidying up that Gibbs (2007) suggests is acceptable if the study is not focusing explicitly on details of language use. Some of the transcribing was done by a third party and an important part of the piloting process, along with the testing of recording equipment, was to establish clear protocols for secure delivery of the anonymous sound files, the formatting required and the interpretation of 'verbatim' transcription. My careful checking of draft transcripts against original sound files ensured accuracy. Inevitably there is an element of subjectivity in transforming a conversation into a written medium (Gibbs, 2007), hence the need for respondent validation. Through conversations at piloting stage, I established that students were likely to be happy receive these and that they felt comfortable with this form of recording.

The process of analysis that followed was common both to transcripts and documentary sources, such as the diary entries, personal statements and essays. All of these represented, in different forms, the participants' voices and I was keen to integrate and compare the emergent themes in each phase of data collection. Before beginning the formal coding, I read each set of transcripts or documentary sources in their entirety, a form of familiarisation advocated by Silverman (2010). This holistic view was maintained throughout the process by the writing of memos as a way of capturing tentative impressions and points of interest (see Appendix 3.12 for example). In getting beyond the 'flood of particulars' (Miles & Huberman, 1994, p.72) and thinking intuitively at a more conceptual level, there was also an attempt to embrace the creative aspects of case study research called for by Simons (1996). With the need for ongoing dissemination of emerging ideas, these memos also helped to crystallise early thinking, drawing together disparate ideas.
As Miles & Huberman (1994) suggest, clarity about what constitutes a 'unit of analysis' for coding purposes is important and Flick (2009) notes that these

could range from a single word to a paragraph, depending on the requirements of the research. The decision was taken to try and identify each separate point made as a unit of meaning, regardless of length or sentence breaks. Following practice through piloting, these sections of text, still of variable sizes, became smaller and more precise as larger units were more easily broken down. Although not an explicit part of Thomas's (2006) inductive process, each numbered unit was initially given a purely descriptive label. Mindful of my potentially close day-to day links with participants, this step was added as a way of encouraging an even closer, slightly more objective, reading of the text before searching for themes.

Through examination of the units of meaning, it was possible to identify themes emerging from a single transcript. Subsequent transcripts were then analysed in the same way and constantly revisited, so that the list of themes was refined as new ones emerged and others were either merged or subdivided. Although the themes or categories therefore arose from the data, they were, in each case, grouped into three overarching categories. Thomas (2006) makes the point that these 'upper level categories' may be derived from the evaluation aims and, in this case, they were the *what, where* and *how* headings that had guided the data collection. Although this represented a challenge to the principle of inductive analysis, there was a mass of diverse data from different participants to make sense of and this loose structure facilitated organisation and comparison over time. In creating categories, the aim, as suggested by Gibbs (2007), was to move gradually away from description and towards a more conceptual view of the data by developing a coding hierarchy of three levels (see Appendix 3.13 for example). In some ways, this was analogous to Miles & Huberman's (1994) conception of 'pattern codes', which allow for inference and the clustering of ideas.

The codes, represented by letters, were then applied to the units on the transcript or document (see Appendix 3.14 for example), allowing for both overlapping codes and uncoded segments where necessary, two commonly accepted conventions within qualitative analysis (Thomas, 2006). During piloting, units assigned the same code were then cut and pasted together for

examination. However, on reflection, it seemed that important contextual nuances might be lost in this way. The approach in the main study, therefore, was to leave the units embedded in the document but to read across a whole set of documents for one category at a time. The final stage suggested by Thomas (2006) is to search each category for insights or quotations conveying the essence of the theme. As such insights emerged, it was important, particularly with a case comprising of multiple participants over a long period of time, to substantiate each claim carefully and transparently. A format was developed for each round of data collection, therefore, allowing for specific units of meaning to be attributed to each point made (see Appendix 3.15 for example).

Although initially analysed in the same way as the other sources, the focus group data presented particular challenges and opportunities. Multiple voices and the interaction involved meant that, with the participants' prior permission, a camera was set up not only to aid transcription, but to allow for observation of non-verbal communication and body language. The interaction also necessitated a degree of caution about using quotations to represent views: as Parker & Tritter (2006) suggest, any individual views should be contextualised carefully in the surrounding discussion. Breen (2006) adds to this by advising the researcher to note the extensiveness, intensity and specificity of comments. Triangulating focus group findings with other, individually constructed, data sources was therefore important. Wilkinson (2011) comments on the rarity of analysis of focus group interaction, as opposed to content; indeed, the opportunity to witness the co-construction of ideas was one of my reasons for using this form of data collection. In addition to conventional forms of analysis, Wilkinson therefore advocates closely examining the nature of the discussion itself at particular moments. With this in mind, two brief excerpts were selected for their potential to shed light on participants' construction of meaning in significant areas. This form of analysis involved a line-by-line commentary on the interaction, focusing on the emerging shared understanding of key ideas, most notably the nature of theory. This acknowledgement of the importance of context, aligns with Silverman's (2013) argument for reflecting sequences as well as instances.

The richness of such data cannot easily be conveyed without considering the overall pattern of interaction.

Quantitative data from the two questionnaires were used as a form of triangulation. As non-parametric data, it was acknowledged that these would produce only simple descriptive statistics. Likert scale responses were assigned a value from one to four (four representing strongest agreement), frequencies tallied and a mean calculated, as the clearest way of determining the cohort's overall strength of agreement with each statement. It was important also to gauge the distribution of responses that had resulted in each mean figure and so a standard deviation calculation was applied in each case, allowing for a better understanding of the pattern of responses (see Appendix 3.16 for statistics). This analysis enabled me to rank the statements according to the level of agreement and also to undertake a basic like-for-like comparison of responses provided before and after the PGCE programme. The midpoint whole cohort validation questions resulted in dichotomous yes or no responses and these were converted into simple frequencies, represented as percentages.

3.9.3 Meta-analysis of the data as a whole

While this initial level of analysis allowed for well-substantiated claims to be made about the participants' views at various stages, it fell short of developing a coherent set of conclusions based on the full set of data (see Table 3.6 for summary of data collected).

Phase	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**
When data collected	Immediately pre-course *July-Sept 2011*	First placement / end Semester 1 *Nov 2011-Jan 2012*	Second placement / Semester 2 *April 2012-June 2012*	Post course, first employment *Sept 2012-Oct 2012*
Case group data	Individual Interview 1 (x 5) Personal statement from admissions (x 4)	Focus group Reflective journal entry 1 (x 5) Assessed essay (x 5)	Individual Interview 2 (x 5) Reflective journal entry 2 (x 5) Group validation of findings so far	Individual Interview 3 (x 5)
Cohort data	Cohort questionnaire 1 (n=87)	Cohort midpoint validation of findings so far (n=76)	Cohort questionnaire 2 (n= 58)	

Table 3.6: Sources of data and phases of data collection

Spencer, Ritchie & O'Connor (2003) make a distinction between faithful representation and theory generation. In order to achieve the latter, engagement was needed at the higher levels of the analytic hierarchy so that patterns and explanations could be discerned. The very nature of explanation, however, is debatable. Yin (2009), taking a rather positivist position, sees this simply as stipulating a set of causal links; Miles & Huberman (1994), while still seeking 'scientific' explanations, take a broader view and emphasise that these are intermediate and dependent on a multitude of factors. This study did not make claims to establish direct causality between events or time periods and participants' conceptions, but there was an interest in exploring patterns and relationships more fluidly with a view to providing a model of a PGCE student's journey of understanding.

The approach to analysis at this second, higher level of abstraction was based on Miles and Huberman's (1994) notion of 'displays', or systematic visual

representations of data. The authors suggest two models: matrices and networks and both proved to be useful. Matrices, particularly time-ordered displays, much like the thematic charts suggested by Ritchie, Spencer & O'Connor (2003), allow key themes to be charted over time in a structured manner. Initially, therefore, findings emerging from the first level of analysis were integrated and mapped in a fairly fluid manner onto large sheets of paper. These were organised as a loose matrix based on the four phases of data collection and the over-arching categories that had guided data collection. Although Yin (2009) and others recommend an analysis framework based on original propositions in this way, it seemed equally important not to abandon the fidelity to emergent themes at this stage. This initially 'messy' exploration, therefore allowed a degree of freedom and exploration. The 'bracketing off' of presuppositions again seemed relevant, as a way of:

> *setting aside presuppositions and reaching a transcendental state of freshness and openness, a readiness to see in unfettered ways.* (Moustakas, 1994, p.41)

This mapping resulted in a formal matrix summarising key points (see Appendix 3.17), but also in a more powerful series of four diagrams aiming to represent links between concepts. These can be seen as a form of networks (Miles & Huberman, 1994), in the form of nodes connected by lines, allowing for a more organic exploration of relationships. Each diagram (see Appendix 3.18) corresponded to a phase of data collection and was based on a common core of teacher knowledge, learning across two settings and theory and practice. This allowed the changing conceptions to be superimposed onto this framework in a colour-coded form to facilitate direct comparisons across phases. Mindful of my interest in the underlying issues rather than case *per se* (Stake, 1995), these visual representations helped me to achieve clarity about the findings as a whole and assisted in identifying the most significant themes. In keeping with the notion of data analysis as an iterative process (Spencer *et al.*, 2003), these themes were regularly tested by revisiting and checking the raw data in a cycle of constant comparison. The Findings chapter that follows seeks to preserve the narrative tracking of themes across four

phases that guided the analysis and Table 3.7 provides a key for the data sources underpinning these claims.

Individual interviews 1: early September 2011, before commencing course 2: late April-early May 2012 3: Sept-Oct 2012	IV 1,2,3
Focus group December 2011	FG
Reflective diary entries 1: November 2011 2: May 2012	RD 1,2
Personal statements Submitted November-December 2010	PS
Assessed essay Written December 2011	AE
Case group validation June 2012	GV
Whole cohort questionnaires 1: July 2011 2: June 2012	CQ 1,2
Whole cohort midpoint validation January 2012	CV
Research diary notes (researcher) Ongoing (dated)	RN
Memos (researcher) Ongoing (dated)	M

Table 3.7 Key used to identify data in findings section

Chapter 4: Findings

4.1 Introduction and contextual information

4.1.1. Chapter structure and organisation of findings

The organisation of this chapter in some ways represents a combination of two of Yin's (2009) recommended approaches. Yin advises that the classic single case study is usually presented as a narrative and, for a longitudinal study such as this, a chronological structure certainly seems appropriate. However, the study attempts to go beyond description alone and so another of Yin's approaches, the 'question and answer' device, has also been employed. Within each of the chronological sections, corresponding to the four data collection phases, the lines of enquiry have been developed further to generate broad headings which provide a consistent thematic structure (see Table 4.1). This structure, in keeping with the theoretical framework for the study, places theory and practice within the wider context of teacher knowledge and student teacher learning.

Original Propositions arising from literature	Lines of enquiry	Where covered in Findings sections
• There is a lack of agreement about what constitutes teachers' professional knowledge	WHAT is teacher knowledge? 1. What constitutes teachers' knowledge?	Teacher knowledge and the place of theory
• 'Theory' in education is a broad and contested concept	WHERE does this knowledge come from?	

• There can be a scepticism about the value of theory to teachers • Students often believe most of their learning takes place in school	2. What is the nature and role of theory in education? 3. What is learned in school and how? 4. What is learned at university and how?	Teacher knowledge and the place of theory Sources of learning
• Students may begin ITE with simplistic preconceptions of teaching • Though somewhat resistant to change, students' preconceptions about teacher knowledge *are* likely to develop over time • Making links between theory and practice can be problematic on ITE courses • The structure of ITE courses has an impact on conceptions of the relationship between theory and practice • Emotions and relationships play an important role in learning to teach	<u>HOW does this learning take place?</u> 5. What is the learning journey and how does student thinking develop? 6. How does learning link and make sense?	The student teacher as a learner Linking learning and making sense of experiences

Table 4.1: The organisation of findings

In keeping with Stake's (1995) characterisation of the instrumental case study, the main focus in this research was on the issues, rather than the participants themselves and findings therefore centre on the conceptions held by the group as a whole. Individual differences and outliers, however, are also acknowledged in a section at the end of this chapter. Participants throughout are referred to by pseudonyms and an attempt has been made to represent authentic voices. Direct quotations were chosen based on two criteria: firstly

where they were felt to represent the essence of the group's views and secondly to give a broadly equitable voice to each participant.

Although the focus is on the central case group, survey data from the wider PGCE cohort are also reported as a form of triangulation and are discussed in a final summary section (p.179). They are also, however, referred to in each of the chronological sections as a form of contextualisation for the main case data. To reflect the fact that they stand somewhat outside the case group, these data are presented in separate boxes. Questionnaire data are shown as mean levels of agreement, based on the four point Likert scale, while the midpoint validation responses, based on a simple yes or no question are shown as a percentage of agreement.

Finally, as acknowledgment of the reflexive nature of the study, 'Researcher's reflections' boxes document prominent thoughts at that time. These are not quotations, but summaries of the emerging themes, drawn from memos and personal research journal notes at each stage. Yin (2011) sees such commentaries as a way of acknowledging one's reflective self, alongside the more overt declarative self. The intention is that the reader can thus make a more informed evaluation of the main findings presented.

4.1.2 The participants

Based on information gleaned from personal statements at the point of application and biographical details offered during Interview One, the following brief profiles of the central case group participants (represented in this thesis by pseudonyms) are offered in order to contextualise the data to follow:

- Bethany (PG1 in data collection) was a 37 year old female. She was a science graduate and a research scientist by background, previously working in an academic institution and a pharmaceutical company. As part of a company initiative, she ran a lunchtime science workshop at a local school and also volunteered on the Right to Read scheme. Due to relocation of her company, she took redundancy and used this opportunity to apply for the PGCE and retrain. Bethany had two children of her own and her partner was a teacher. Bethany was on the 5-11 PGCE route.

- Fay (PG2) was a 28 year old female. Following an English degree and a graduate diploma in Psychology, she worked as a teaching assistant in a pupil referral unit for children with emotional and behavioural difficulties. Fay then worked with adults with learning difficulties as part of an advocacy organisation but this was a charitable organisation and there was little job security. Fay's mother was a head teacher in a primary school. Fay was on the 5-11 route.

- Natasha (PG3) was a 21 year old female and came to the PGCE straight from a degree in Education Studies at the same university. Prior to this, she had experience of working with children through a college child care course and had had placements in schools. She had friends who had done the course before. Natasha was on the 3-7 route.

- Tracey (PG4) was a 23 year old female. She was a recent English graduate. Her mother and other family members were teachers and she had always felt she might pursue this career herself. She decided to take a year out following graduation in order to be sure and spent this time working in a shop and volunteering in her mother's school. Tracey was on the 3-7 route.

- Nick (PG5) was a 23 year old male. He spent time throughout his degree volunteering at a local school. After graduating in History, he got a job as a teaching assistant at a local school for a year, a post which he had really enjoyed. Both of his parents had been head teachers and he had grown up always quite involved in their schools. Nick was on the 5-11 route.

4.2. Phase One: pre-course preconceptions

Phase 1	Phase 2	Phase 3	Phase 4
Immediately pre-course *July-Sept 2011*	First placement / end Semester 1 *Nov 2011-Jan 2012*	Second placement / Semester 2 *April 2012-June 2012*	Post course, first employment *Sept 2012-Oct 2012*

4.2.1 The student teacher as a learner

Shortly before embarking on the course, students demonstrate, in both personal statements and initial interviews, some insight into the issues facing teachers and the breadth of the role, but few specific examples are cited at this stage. Considerations about effective teachers centre instead on general attributes, such as being a role model and a good team member and on observable features including enthusiasm and a sense of humour:

> *The most effective teachers that I've seen have been really enthusiastic, clearly have a passion for what they're doing.*
> (Bethany, IV1)

These beliefs are presented almost exclusively as being based on recent classroom observation. Only one participant refers in any depth to personal experiences as a pupil during interviews and this is not mentioned in any of the personal statements examined. There is an expectation that teachers also need to be learners and that this will extend beyond the course:

> *I just think it's one of the only jobs where you'll never stop learning.*
> (Tracey, IV1)

> *I can only assume that teachers have their ears and eyes open all the time really and just be aware that things might need to change and be adjusted.*
> (Fay, IV1)

This readiness to learn is also seen through links that are made to past experiences and specific strategies as a learner that may help with what is to come:

> *I'm so used to keeping up to date with new things anyway.*
> (Bethany, IV1)

> *What I always do is I always do spider diagrams, make it pretty so I can see the links.*
> (Natasha, IV1)

All participants express their keenness and motivation but, along with the eagerness, there is, understandably, trepidation about what is to follow. At this stage, worries are based almost completely on the heavy workload, for which the course has some notoriety:

> *I've spoken to a lot of people who have done PGCE courses and they've all told me it's very, very labour intensive, there's a lot of work and you'll be very busy for the year.*
> (Nick, IV1)

> *I'm quite nervous because of how competitive it was. Like lots of my friends had told me it was really intense.*
> (Natasha, IV1)

Concerns as learners centre mainly on the sheer volume of knowledge that will need to be assimilated. The anticipated challenge seems to be the need to accumulate sufficient expertise in a short period of time in order to be credible in the classroom, but there is little consideration of the nature of this knowledge:

> *I feel like there's an awful lot of stuff that I don't know that I really want to know about.*

(Fay, IV1)

I think that pretty much everyone on the course is going to be just desperate for knowledge.
(Bethany, IV1)

Despite an inevitable degree of uncertainty, linking up the various facets of the PGCE journey is described in relatively unproblematic terms. Notable by its absence is any discussion of some of the important themes, such as interpersonal issues, that will emerge later.

I just imagine having some moment of epiphany where I think, ah, that's what we studied there and that's how we apply this to that and that links up. So I think, once you've made the connection, it'll all link in really easily.
(Tracey, IV1)

I think I will be able to [make links] quite easily. I might need some support in areas as to things that aren't so clear that maybe we don't cover but that you'll do in practice.
(Natasha, IV1)

4.2.2 Teacher knowledge and the place of theory

Prospective students have a firm belief that they are entering a profession with a high status and a body of professional knowledge:

I think there are certain professional qualities that you have to have to be a teacher and I don't think that everyone can do it. I don't think you could just pick anybody off the street and put them in front of a class of children and say 'teach them'.
(Fay, IV1)

I don't really view it as different from the medical profession.
(Bethany, IV1)

It is expected that this expertise is based on a distinctive, agreed body of knowledge, though this is described in somewhat vague terms:

A skills base that's applicable to most educational settings.
(Fay, IV1)

I do think that [your knowledge] is distinctively different for a teacher.
(Natasha, IV1)

When asked what might constitute teacher knowledge and effective practice, two main facets are mentioned at this time. The first, and most prevalent, concerns ways of keeping pupils engaged through varied and motivating activities that are delivered in a child-friendly way. There is reference to making learning fun, maintaining children's attention, keeping order and communicating effectively:

Trying to use all these different ways of getting the kids interested in the subject.

(Bethany, IV1)

So it doesn't feel like learning, so you just trick them into learning things.
(Tracey, IV1)

The other priority is the accumulation of factual knowledge, chiefly in the form of subject expertise, but also knowledge of the curriculum and familiarity with points of everyday routine and educational policy. From this perspective, PGCE learning has a clear purpose:

To make sure we're delivering what we're supposed to be delivering in the classroom.
(Fay, IV1)

The vision seems to be that of a centrally prescribed, competence model of teaching and Fay's emphasis on the word 'delivery' is poignant in this sense. Beyond this, however, there is little consideration of what might constitute effective teaching. Little emphasis is placed on pupils as learners, for example.

Interestingly, when this interview data is compared with personal statements from the admissions process some months earlier, a slight difference is evident. While content, curriculum and engagement are prevalent in these statements, there is also a very strong sense of pupils as individuals with diverse needs, although points are fairly general and ways that these needs might be met are not considered.

Children are unique and learn in many different ways.
(Bethany, PS)

I have developed strategies to support children and manage individual children's needs.
(Nick, PS)

It seems that some sense of individual needs that has been gained through pre-course voluntary experience may have receded somewhat from the forefront of participants' minds by the time they reach the eve of the course.

Before the PGCE begins, participants make little spontaneous use of the word 'theory' in interviews, even when discussing aspects of teacher knowledge in depth. It is used fleetingly by three of the five participants and only two explicitly refer to theory in contrast to practice. In personal statements, too, the word occurs only once and this in reference to previous study rather than the PGCE:

> *My degree…best suits the way I work, with theory and practical opportunities.*
> (Natasha, PS)

Theory, largely discussed using other terms, therefore, is characterised as knowledge created by others and, while variation across settings and individuals is expected, it is anticipated that there will be some broad, generalisable principles:

> *There are certain values that are universal.*
> (Fay, IV1)

> *I'm sure there are certain ways of teaching. There's always going to be a basis to it.*
> (Bethany, IV1)

> *Your underpinning facts would, I imagine, be the same.*
> (Natasha, IV1)

Theory at this early stage is accepted almost entirely without critique. The possibility of personal ownership or construction of this form of knowledge is not evident. Only Bethany, who has a research background, shows signs of questioning ideas at all:

I would put quite a lot of emphasis on findings from research but then I wouldn't necessarily think that was then gospel truth.
(Bethany, IV1)

Nevertheless, from the outset, theory, in the forms of a body of knowledge and published research findings, is expected to be important in learning to teach and the value of looking beyond immediate practice to seek more generalisable knowledge is seen:

I think all different theories of learning and history of education and things are important to know about.
(Tracey, IV1)

The value of educational research findings, as one possible source of knowledge, is accepted by all participants and three specifically refer to its influence on practice:

I personally think that research is very important and pertinent to be able to be constantly evaluating how you work as a school, how you work as a teacher in ensuring that everybody has the best chance to have a good education.
(Fay, IV1)

Research might inform them on how to make practice in schools better.
(Natasha, IV1)

4.2.3 Sources of learning

The case group, when comparing the PGCE with the employment-based GTP sees a benefit in the grounding and structure offered by university-based learning:

I actually felt like I needed to come to an academic setting to actually learn about teaching rather than me going in, straight into it.
(Bethany, IV1)

At this stage, university is seen first and foremost as the source of basic techniques for what could be seen as classroom survival and the focus is on learning 'tricks of the trade' that will enable students to be plausible in school.

Terms like ‘background’, ‘basics’, ‘pointers’ and ‘black and white’ are used to convey this. There is a strong sense of university as preparation for the real learning experience that will follow upon arrival in the classroom. Although two participants refer to learning from peers, the anticipation of the university’s role at this point is primarily as a provider of essential knowledge that will later be applied in practice:

> *The background to that at the university and the work that you do at the university will help you be better prepared when you go into those situations.*
> (Nick, IV1)

> *Hopefully it would give me certainly learning [so] that I won’t go into a classroom and feel like a complete novice.*
> (Bethany, IV1)

> *[Assignments] might be something that maybe you could put into practice on your placements.*
> (Natasha, IV1)

When asked before the course specifically about expectations of Masters level study, the participants are generally positive, but somewhat ambivalent, about the value that this might add. It is clear that this level of study is not at the forefront of their minds. It is seen as something peripheral, as neatly summed up by Nick:

> *I think it wouldn’t be my priority but it would be something that would enhance my knowledge at some point.*
> (Nick, IV1)

Before beginning the course, the case group students expect that most of their learning will take place in school and this is the experience that will be most valued.

I'm going to learn 90% of it I think from there because they're in there day in day out and they do it every day.
(Bethany, IV1)

I've always been a great believer that you learn on the job and that you learn the most when you're in the setting you're going to be going into.
(Nick, IV1)

They are clear, nevertheless, that learning in the workplace alone would not be sufficient and there is strong support for the structure and additional experiences provided by the PGCE.

When considering how and what might be learned in school, the focus is initially on observation and mimicry, rather than learning through personal experience. Knowledge to be gained is seen largely in the form of practical tips which can then be replicated:

I'm going along trying to pinch things from other people, seeing what they do effectively and hopefully I can sort of recreate…
(Bethany, IV1)

…seeing good teaching in action and how we can draw on what we see.
(Fay, IV1)

This may reflect the students' pre-course experiences of the classroom in helping and observing an 'expert' practitioner and shows little awareness of wider forms of learning and thinking.

4.2.4 Linking learning and making sense of experiences

Before the course begins, students do not seem to anticipate major problems with linking different sources of knowledge, beyond the challenges of organisation and time:

> *I'm expecting to have to be very organised and really on the ball to be able to link it all.*
> (Fay, IV1)

When prompted to consider diverse sources of knowledge, there is some sense of these being distinct, though this is expressed only fleetingly by three participants and only Nick refers to a difficulty with transfer:

> *To actually read something is one thing. To actually experience it is probably entirely different.*
> (Bethany, IV1)

> *If people are referring back to things we've already done and referring to the practical use of theory in the classroom, it's going to help.*
> (Tracey, IV1)

> *But transferring the theory into the practice is going to be something that I've…well, not struggled with in the past, but not always made the links between.*
> (Nick, IV1)

This is also seen in the personal statements from the admissions process, though only from two participants. One refers to hands-on and academic learning (Bethany, PS) and another mentions theory and practical opportunities (Natasha, PS). In both cases, however, these are mentioned as being complementary rather than incompatible.

Students have opted for a PGCE, rather than an employment-based route into teaching partly because of the structure it offers. There is a hint at the need to learn generalisable principles:

> *It's not specific to one setting. You're going to get experience from a lot of different places. You've got the kind of guidance and the lecturers are going to be there as a support basis.*
> (Natasha, IV1)

There is some early awareness of the potential advantages of reflection and peer discussion about experiences. However, this is not particularly prominent in the initial interviews and is described in terms of talking and sharing rather than in more structured, purposeful terms:

I think it would be useful probably to come back and have time to reflect on each other's placements and to be able to talk about what happened at your school.
(Fay, IV1)

4.2.5 Summary of Phase One

Before starting the PGCE, new students are keen and ready to learn. Challenges ahead are seen mainly in terms of workload and volume rather than complexity. Although far from naïve about teaching, students describe the course itself in relatively unproblematic terms. Students embark on the course with a strong belief that there is a body of knowledge to be discovered. Their preoccupations are with engaging pupils and with factual knowledge of subjects, curriculum and policy. Although there is reference to generalisable education principles, to be applied by them but created by others, the actual term 'theory' as a distinct idea is little used. University is expected to be the source of background knowledge and tips that can then be directly applied in the classroom and there is a degree of ambivalence about the higher level

Masters study. The expectation is that most learning will take place in school and the emphasis is on copying techniques modelled by experienced teachers. Students anticipate few difficulties in integrating different sources of knowledge. There is only a limited awareness of the value of reflection and peer discussion.

4.3 Phase Two: Semester One

Phase 1	Phase 2	Phase 3	Phase 4
Immediately pre-course *July-Sept 2011*	First placement / end Semester 1 *Nov 2011-Jan 2012*	Second placement / Semester 2 *April 2012-June 2012*	Post course, first employment *Sept 2012-Oct 2012*

4.3.1 The student teacher as a learner

Looking back as Newly Qualified Teachers (NQTs), the first semester of the course is recognised retrospectively as an intensive period, with the demands of lots of university input followed by the experiences of the first assessed placement:

> [*In the early weeks] we were having lectures over and over again, there was so much coming at us.*
> (Nick, IV3)

At the time, during the first placement, reflective diaries show the emergence of professional decision-making in terms of lesson content and approaches, both before and during lessons, for example:

> *During the lesson the scales that we were going to use wouldn't work so I changed the way we would measure the results.*
> (Bethany, RD1)

Notable by its absence, however, is much acknowledgement of external influences such as university sessions and mentor or link tutor input. Students in the throes of this first assessed school experience seem to be fairly inward looking, perhaps suggesting that links within the course are not yet well established.

Returning from school, a number of realisations are evident in the focus group discussion. Firstly, the complexity of teaching is beginning to be appreciated, as well as the sheer workload. Students now appreciate the need to compromise rather than striving for constant perfection:

> *Being a teacher isn't just going to school and teaching a lesson. It's planning that lesson…it's also the counselling part…and also just extra-curricular things…It all takes extra time.*
> (Nick, FG)

> *It's about knowing that all the time you can't be one hundred percent at everything all the time. Just once you might have to accept good or satisfactory.*
> (Natasha, FG)

Secondly, there is now an awareness of the importance of interpersonal relationships. The personal journey envisaged at the start now involves others:

> *I hadn't really thought about that as being something that I would really have to deal with…I suppose I'd kind of forgotten the fitting in with the rest of the teaching staff.*
> (Bethany, FG)

Finally, there is evidence of learning to teach being an emotional undertaking. There are peaks and troughs of confidence and self-doubt, which are expressed vividly in the focus group:

> *I was thinking the up and down would be different weeks, but it was literally between days.*
> (Tracey, FG)

> *I would beat myself up over ridiculously little things and then you'd think, come on now.*
> (Bethany, FG)

This sense of a new understanding of the learning journey is reinforced in the assignment submitted at this time. Despite the formality of the medium, the essays allude candidly to gaps in knowledge that have been encountered and, once again, the central issue of confidence and relationships. In slight contrast to the focus group discussion, however, issues are largely presented as having been resolved. This may be due to the nature of this assignment, with its emphasis on the reflective journey undertaken:

> *The process of transition on placement was a roller coaster with endless highs and some lows, the key for me was to develop resilience, be open to constructive criticism and advice to improve my teaching practice.*
> (Natasha, AE)

> *I believe that the minimal opportunities to reflect with my mentor tested my resilience and capacity to 'bounce back'*, *but demonstrated that they were able to remain intact with positive outcomes for the pupils.*
> (Fay, AE)

The tendency to follow a challenge with a positive response or outcome shows an awareness of constructive ways forward as a learner, but the essays give little sense of the lingering uncertainty conveyed among peers.

4.3.2 Teacher knowledge and the place of theory

The reflective diary entries completed during the first placement document many aspects of knowledge and understanding that have underpinned the selected lesson, but these focus almost exclusively on aspects of subject knowledge *per se*, with only one reference to pedagogical considerations other than pupil engagement.

Following the intense experiences of the first school placement, a much broader conception of teacher knowledge is evident. While teaching engaging lessons remains important, a far greater emphasis is placed on children as learners and, to a certain extent, the focus has shifted away from the teacher's performance and towards a focus on age-appropriate pedagogies.

The focus group in particular shows the co-construction of this broader understanding (see focus group extract in Appendix 4.1). Reflecting on the different age groups encountered and comparing Early Years Foundation Stage with Key Stage Two, the participants move beyond subject knowledge *per se*:

> *It's not about the actual academic level of knowledge.*
> (Bethany, FG)

There now seems to be a multi-layered view, also incorporating curricular and pedagogical insights and described as:

> *subject knowledge in terms of pedagogy at nursery or in EYFS and then the actual curriculum itself.*
> (Tracey, FG)

To take a particular example:

Say we were looking at sources of light, obviously I know what a source of light is and what isn't. So you don't really need to extend that any further but then it's knowing how to teach that to a three year old.
(Tracey, FG)

Although some appreciation of the diversity and challenge of teacher roles was evident at the outset, the complexity of professional practice and lesson planning in particular is now recognised more clearly. Through reflective diary entries, a sense of professional decision making is clear, though judgements tend to be attributed to personal experiences and research or mentor guidance, rather than any underpinning, generalisable principles.

Retrospectively, participants see the early weeks of the course as being heavily loaded with theory. Following the final placement, during a validation of emerging findings, one participant remarks of this time:

In the first four weeks I just felt a little like I was reeling a little bit before I went on first placement, because I was trying to digest everything.
(Fay, GV)

Recalling this period later, as NQTs, this impression is reinforced:

During the first weeks it seemed to be that the theory took over. You got in there and you was learning all the theory, the strategies and waiting to put it into place.
(Natasha, IV3)

You do just hit the ground running and there's a huge amount of information to take in. All of a sudden, I was going to the library and taking things out, which is why theory really peaks here.
(Fay, IV3)

The first placement itself is remembered as a time when survival was the prime concern and links between theory and practice all but forgotten.

I think during PT1 I was so much more focused on getting through the day and teaching that perhaps I didn't really think much about the theory behind everything.
(Bethany, IV3)

To be honest, theory is forgotten about a bit really because you're so absorbed in the day to day activities of the school.
(Fay, IV3)

This is also exemplified at the time by the almost total absence of theory from the diary entries, with the exception of one oblique reference:

My knowledge and understanding of behaviour management strategies was drawn on.
(Tracey, RD1)

It would seem that, despite the 'overload' of university-based learning at the start of the course, once in school, all of this is rather distant and disconnected.

Following the first placement, a very different understanding of theory is evident. During the focus group, the word 'theory' is used by one participant

and I then ask the group to explain what this means to them. The development of a shared understanding is then seen in the following extract in Figure 4.1 (see annotated extract in Appendix 4.2 for a more detailed commentary).

Figure 4.1: And what is theory?

In contrast to the rest of the discussion, it is interesting to note how fragmented and hesitant this interchange is, suggesting a degree of uncertainty. Analysis of the video footage reveals participants tentatively looking at one another, seemingly for cues and reassurance, as a group understanding emerges. In this exchange, it is acknowledged that theory is open to interpretation. The cause of this shift may be partly attributed to Bethany's lead in the discussion, but also the influence of university sessions (to which Nick alludes) and the immediately preceding placement experiences as Natasha and Tracey refer to coming up with one's own strategies and seeing what works.

In order to establish a shared understanding of this previously undefined term, students' words were amalgamated into a composite definition (see Figure 4.2). This was then sent to the group for validation and, thereafter, was referred to when discussing theory.

Figure 4.2: Definition of theory arising from focus group

The value of theoretical ideas is once again acknowledged at this stage:

> *[Theory] helps me understand things better, definitely, like why you do things in a certain way.*
> (Bethany, FG)

> *It's looking at what people have conducted research on and trying to apply that in our own settings.*
> (Nick, FG)

Above all, the retrospective use of theory is strongly identified as a way, through reflection, of making sense of practice, at least to the extent of recognising which aspects of theory may have been relevant in certain situations, as summarised in Natasha's account from the focus group:

> *Maybe while I was actually on placement, I didn't reflect and make the links to university as often as I would have liked because you're so zoned into the practical…But when you finish your practical you come back. I had lots of episodes, like at the weekend, where I thought, oh well, I did that and that must be what so and so's doing. And then when you come back to university and you're all talking about different experiences, and sharing them, they all do just slot into place.*
> (Natasha, FG)

The essay written after the first placement shows little explicit evidence of theory having consciously informed practice, with just two mentions of reading about EAL and one about Piaget's ideas. Nevertheless, it does provide a great many examples of students' abilities to use theory retrospectively:

> *The reflection process I used to improve my planning…was best represented by Kolb's (1984) learning cycle.*
> (Natasha, AE)

> *Claxton's (2002) model of Learning Power suggests the benefits of the Four Rs…Through effective cross-curricular lessons, I was aiming to equip the children with both transferable and independent learning skills.* (Fay, AE)

Whether this thinking was also a conscious part of the decision-making at the time is impossible to say. Although this use of theory would, of course, be expected in such an assignment, the requirement to think about practice in this way, immediately after the placement, may be contributing to the ideas expressed in the focus group at this time.

4.3.3 Sources of learning

Despite the value seemingly attached to university input, it is noteworthy that, when in school during the first assessed placement, there is little evidence of this. The diary entry requires participants to discuss the thinking behind a successful lesson and where the knowledge and understanding came from. Responses focus on students' own prior knowledge and personal research but only one of the five refers to anything from university, this being a lecture on behaviour management.

Even the reflective essays about personal progress in school, written immediately after the placement, for an audience of tutors, make only two mentions of any university-based influences. This is in contrast to the focus group discussion back at university following the placement, during which examples of ideas that have been transferred from taught sessions to the classroom are readily offered by all participants. Rather than broad theoretical

ideas, however, these tend to be in the form of practical activities which have been demonstrated at university and reproduced (or ‘stolen’, as Fay puts it) for the classroom.

> *I remember I used the envoying technique in school myself and trying it and seeing how it works with children and whether they understand it and it really does. And that’s really helped.*
> (Nick, FG)

While there may be a degree of observer effect, it seems likely that the very act of coming together with peers has prompted these links. Indeed, the most striking feature of this post-placement data, however, is the high value now attached to university as a place for sharing experiences:

> *This week, I think, over the last few days, has been really valuable just to be able to come back in and talk about it.*
> *(Bethany, FG)*

There is an emphasis on making sense retrospectively, both through peer discussion and through specific tasks. The structure and the opportunities provided by the university in this respect are seen as being very important. As well as the learning and the understanding that emerge in this way, there is a sense of mutual support. Indeed, the focus group itself was enjoyed by participants for this very reason, as this sort of discussion allows students to:

> *share experiences and realise that there’s someone else that’s felt the same as you have at some point and you’ve not been the only one.*
> *(Tracey, FG)*

During Placement One, the first Masters assignment has yet to be completed so this appears to be far from students' thoughts. By the end of the first term and first placement in school, a significant shift has taken place. There is recognition, above all, of the crucial role played by the mentor. This is a central topic of discussion during the focus group. The mentor is seen as valuable in, for example, providing feedback, allowing a degree of freedom to experiment and in giving reassurance. Alongside the very many examples of supportive practice, there is acknowledgement of the need for approval and of the complexity of this relationship. Participants allude, with a note of surprise, to the potential difficulties.

> *The thing I've found is the method of having a mentor, it has its flaws because if your mentor doesn't necessarily agree with your teaching style, then you don't do very well.*
> (Nick, FG)

> *But perhaps naively, I just kind of assumed that if someone was going to be a mentor, they were very open to, I'm having a student, I shall be the world's best mentor, I shall support them…*
> (Bethany, FG)

> *You don't know what kind of mentor you're going to get…you're not going to know the dynamics of your relationship with your mentor until you get there.*
> (Tracey, FG)

The essay written at this time corroborates this, highlighting the role of the mentor, particularly in terms of providing feedback. A difference in tone is evident in this piece of writing, however, as the process is presented as being largely straightforward, as suggested by terms like 'duly' and 'subsequently'. This is in contrast to some of the focus group responses.

> *The other adults were able to feed back to me…and I was duly able to restructure my lesson.*
> (Nick, AE)

> *Each teacher was unique…I received excellent advice and subsequently used techniques from many of them.*
> (Bethany, AE)

The public, formal face presented through academic work seems, therefore, to mask the complexity and potential difficulty of this relationship, offering a reminder of the value of soliciting students' perspectives in other ways.

This focus of attention retrospectively on the mentor is in stark contrast, however, to the reflective diary entries completed independently in the midst of the placement. In these, when asked to consider sources of knowledge and understanding, only two of the five participants make any mention of the

mentor and, in both cases, this is a fleeting reference to a discussion about lesson content. There is perhaps a perceived need for students to present themselves as capable, autonomous professionals when asked to justify their practice in this way.

From both sources of data, however, there is by now a strong sense of the value of practical, hands-on experience. This is expressed clearly in the focus group:

> *I guess the practical experience has helped no end really.*
> (Bethany, FG)

> *Nothing beats actually doing something does it?*
> (Nick, FG)

University link tutors (ULTs) are mentioned only fleetingly, in connection with what are seen as assessment visits (in reality, moderation visits), rather than as sources of learning themselves:

> *I remember when I found out my ULT visit day and the things I'd be expected to do by then, I was like, I'll never, it's really soon.*
> (Tracey, FG)

4.3.4 Linking learning and making sense of experiences

During the first placement, though linking and making connections are not referred to explicitly, the reflective diary entries show evidence of this in action. The lessons described draw on a range of sources:

I utilised the GCSE Letts revision guides on Science which were a great help in visually setting out which parts were which in a way which I could easily transfer to the children.
(Nick, RD1)

[The knowledge] came from discussion and collaboration with my mentor as well as finding suitable resources for teaching online.
(Tracey, RD1)

Immediately after the placement, the assignment submitted shows far more explicit evidence of reflection and making sense. Four out of five participants describe reflection in very positive terms such as 'vitally important' and 'essential'. Students are able to express this in formal, academic terms, as befitting an essay:

I feel that Schön's reflection-in-action model, whereby reflection is ingrained in practice and not always a heightened conscious action, best describes my understanding and use of reflective practice.
(Fay, AE)

The contrast is to be expected, of course, but begs the question to what extent this level of thinking genuinely occurs during and after practice and to what extent it is purely an academic exercise. Nevertheless, in the focus group at this time, there is unanimous support for reflection being central to practice, though some reservations are expressed about having to record this formally:

The process of reflection has surprised me…That's surprised me so much that you have to do that much.
(Nick, FG)

Two forms of reflection are discussed. One takes place on a daily basis, largely triggered by the university's requirements and paperwork:

When you've done something you come back and you scribble it in your RRP [Record of Reflective Practice]
(Nick, FG)

The other happens later, sometimes back at university, when the progress they have made can be appreciated fully:

The reflection I feel has been a big part of it because when you come back to university after your practice you're able to share all your ideas. (Natasha, FG)

It was just remembering where you started from and how much you've come on.
(Tracey, FG)

There is an attempt by tutors to link school and university based learning on the course through school-based tasks. Although the potential value of these is appreciated, there is some sense of university and school involving separate demands at this stage:

It was hard to go from having two weeks in school and then coming back to uni and having that lecture…they seemed really separate there.
(Tracey, FG)

The various instructions and sources of guidance for the school-based tasks can be hard to keep track of and students working with pupils in the Early Years Foundation Stage feel that some of the tasks are difficult to carry out, being aimed more at the majority five to eleven range. Though not extreme,

there is a feeling of university and school being somewhat disconnected at this stage. The deeper purpose of the tasks, in terms of understanding, seems somewhat unclear. They are portrayed as a way of the ensuring students are doing the right thing and are characterised by Nick as detached from the main business of teaching:

> *A sort of guide of extra stuff you could be doing if you ever get any time to work on.*
> (Nick, FG)

4.3.5 Summary of Phase Two

In the first semester, there is an initial overload of information at university followed by a somewhat inward-looking focus on survival in the classroom. Faced with the realities of the classroom, students quickly realise that there is a strong affective and, in particular, interpersonal dimension to learning to teach. In school, working with a mentor and learning from personal experience are pre-eminent in student's thinking. A broader view of subject knowledge is evident during and after the first placement and there is a strong focus on ideas relating to pedagogy. Theory is now conceived of as tentative and provisional and of use in making sense of practice retrospectively. There is a sense of separation, however, between university and school knowledge at this point and decisions in school are context-bound, informed by immediate experience rather than underlying principles. Indeed, during the first

placement, university influences are little acknowledged, although they are seen in a positive light afterwards. University, however, has come to be seen as a place for sharing ideas with peers and reflection has become highly prominent in students' minds, in both immediate and longer term forms.

4.4 Phase Three: Semester Two

Phase 1	Phase 2	Phase 3	Phase 4
Immediately pre-course *July-Sept 2011*	First placement / end Semester 1 *Nov 2011-Jan 2012*	Second placement / Semester 2 *April 2012-June 2012*	Post course, first employment *Sept 2012-Oct 2012*

4.4.1 The student teacher as a learner

During the second placement, there is a sense of growing confidence expressed in interviews, as students begin to feel more like autonomous teachers, though this confidence has often been developed through surviving adverse situations:

> *I was doing a lot more than probably I should have been required to do at that stage but, you know, it equipped me with a lot of skills and belief of what I'm capable of doing and it showed that I'm resilient, so there we go!*
> (Natasha, IV2)

There is a clear feeling of progress having been made. Assessment is cited, for example, as an area which has developed since the first teaching placement.

When invited to revisit their pre-course views on effective teachers, participants largely stand by these ideas, simply adding extra attributes. There is little evidence, therefore, of them seeing their own early views as particularly naïve. However, all five are able to identify very clearly the ways in which their priorities have changed. Though diverse examples are cited, they broadly represent a move away from the conception of teaching centred on the teacher delivering subject knowledge and towards a more child-centred position:

> *I think at the start I was very much thinking that it would just be sort of tips and strategies but now I think it's more of a whole view and it's not*

just about what you're putting forward to the children in the input of a lesson for how many hours of a day.
(Nick, IV2)

It sounds ridiculous to say, to be a teacher, but I think subject knowledge per se isn't so important as the pedagogy and the making relationships with children and other adults.
(Tracey, IV2)

Although reassurance and support is still important, students now show signs of being more confident. Despite the higher percentage of teaching time involved, there are now few overt references to workload, perhaps suggesting that the initial period of shock has passed Links within the course are better understood and this is a time of 'making sense', although there is vagueness about the process. The change has been gradual and hard to pinpoint and Tracey's driving analogy is striking:

But then, thinking about the start, it's just, I don't know how I got here. It's like you know when you're driving sometimes and you can't even remember the journey, that's how it feels.
(Tracey, IV2)

I think it makes you realise. It just clicks. I don't know when it clicks'.
(Natasha, IV2)

The diary entries written at this time again show evidence of resourcefulness and autonomy in decision making:

I had also borrowed items from Derbyshire library service prior to the placement…for this purpose.
(Fay, RD2)

However, the selected lessons are still described in fairly unproblematic terms, with only one student explicitly referring to a dilemma encountered. This may be partly due to the fact that participants have selected lessons they judge to be successful. However, this is also borne out in the interview data, in which the lesson preceding the interview is discussed: the decision making and sources of knowledge behind the lesson are communicated without sharing any sense of difficulty or dilemma.

A powerful observation is made by one participant, suggesting a difference in learning in school, compared to learning at university:

I don't feel like a student when I'm in school…You've got to show that you're confident with what you're doing, whereas at uni I think you can be more, 'well, I am a student and I am learning'. And it's not to say you're not learning when you're in your teaching placement, but you'd save that for more specific times when the children weren't there.
(Fay, IV2)

It seems that in school, learning has to be hidden and a façade of competence and confidence maintained. With a growing emphasis on school-based training, this is a significant issue, as the student's status as a learner may be eroded. Although not expressed in quite these stark terms by other participants, there is a strong emphasis elsewhere in the data on a convincing performance, with references to feeling like a 'real teacher' (Tracey) and 'knowing the role' (Bethany), for example. This view is echoed in other comments, such as Nick's depiction of university as a form of support structure:

I think, every step of the way, the university has been waiting in the wings with suggestions for good practice.

(Nick, IV2)

4.4.2 Teacher knowledge and the place of theory

Interviews during the second assessed placement reveal a conception of knowledge even more firmly based around the learner. There is a focus, through differentiation and assessment for learning, on catering for individual needs:

> *[I] pick out the best parts [from planning] that I can then match to the pupils' needs and I think they will respond best to.*
> (Nick, IV2)

Knowing how to build relationships with pupils is also seen as being at the heart of a teacher's role:

I think developing that relationship and having the high expectations so they know what they can do and what they can't do and they relate to you and you relate to them.
(Tracey, IV2)

During the respondent validation discussion, participants are asked to comment on the group's emerging understanding of teacher knowledge as provisional and uncertain. Bethany reaffirms this and shows a new appreciation of knowledge as constructed rather than transmitted:

It's funny because I recognise at the beginning saying there must be things that I will get told and I will learn and that will make me a fantastic teacher…So now I see it more as an ownership and what do I believe in and what am I going to build on my classroom. Rather than, here are your rules and this is what you will learn to be a teacher. Because it's not really like that.
(Bethany, GV)

Considering this period retrospectively after the course, students also discuss the influence, just prior to this second placement, of the brief, non-assessed experiences in alternative settings such as special schools and ethnically diverse settings.
Diary entries again show instances of professional judgement, but convey little sense of dilemma or difficulty, as this example illustrates:

I decided to remodel an example of the problems they were expected to complete. Once the word problem had been remodelled, the children appeared to be much more confident in developing strategies…
(Natasha, RD2)

During Placement Two, this view of theory as provisional and open to question remains. The statements on this are expressed with a degree of confidence at this stage:

A theory can be disproved at any moment.
(Bethany, IV2)

Theory isn't law is it?
(Fay, IV2)

It can never be 100% concrete because theory is just a theory.
(Tracey, IV2)

In Natasha's case particularly, there is also some recognition of how her views have evolved and the influence of practical experience:

I looked at it as more of a structure and more as something that you had to follow, not realising that it was, that it could be interpreted in different ways. Whereas I think, having been on practice…it makes you realise that interpretation is a big thing in teaching.

(Natasha, IV2)

The negotiated definition of theory based on an amalgamation of the focus group comments is wholly accepted by all as still appropriate at this stage. When asked directly, participants tentatively agree that they too can be theorists, but it seems to be a concept they had not previously considered. Three students laugh when discussing this and the ambiguity can also be seen in the phrasing of their immediate responses:

I don't know. I don't see why not. It just sounds funny.
(Fay, IV2)

Probably. I think I've not come up with any ground-breaking ideas.
(Tracey, IV2)

Well I'd like to think…Yes, I suppose so.
(Nick, IV2)

After some consideration, this is seen as more plausible, reflecting their broader understanding of the concept of theory, and all are able to envisage a situated form of personal theorising. Compared to the view expressed before the course, there is a greater sense of ownership of ideas:

That's all a theory is: someone's ideas. So if my ideas on how something works, that could be a theory in itself and it could support other theorists' ideas. It could contradict what they think.
(Natasha, IV2)

I think I can certainly say for my class, at that moment in time, a certain thing has happened and I can theorise why it might have happened.
(Bethany, IV2)

During this final school placement, feelings about theory's influence on practice remain positive from all participants, but this is not necessarily a conscious influence. There is a strong sense that, over time, theory has an increasingly subconscious influence on day-to-day thinking.

> *When I'm planning, well when I'm delivering a lesson, I'm not thinking, 'Oh, this is a very behaviourist approach to learning'. But I think it's just in here.*
> (Tracey, IV2)

The retrospective use of theory is again supported by all participants, though they struggle to cite specific examples of this.

> *I quite like it that way round in that you're not led to a conclusion from theory, but you can use it to qualify something that you find yourself in practice.*
> (Bethany, IV2)

> *I think it could come in handy for when you've had a particularly bad lesson and want to take it apart again…in that sense the theories could really help to further your learning for next time.*
> (Nick, IV2)

Looking back later as NQTs, this period is seen as a time when theory comes to make sense and link to practical experiences. This is mentioned explicitly:

> *I think on your second placement you were more aware of different theories and ideas and how it influenced your practice.*

(Fay, IV3)

From PT2, the theory kind of dropped into place as well, like you're balanced, like you balanced both.
(Natasha, IV3)

These retrospective comments, though more explicit due to the line of questioning in Interview Three, are substantiated by comments made during this phase:

I look back now at things I've done within university settings and link it to what I'm doing here.
(Bethany, IV2)

Theory's higher profile during this placement is attributed not just to a greater holistic understanding of the course, but also to other influences. There is the prospect at this time, widely cited after the course as influential, of a *viva voce* assessment to follow the practice:

[The viva] almost forced me to look at things in the context of the theory so I'd be able to back it up when it came to defending it.
(Nick, IV3)

Then it was viva prep and you did, the requirement was to do a lot of reading. Again, a lot of research, but you were already doing some of the theory and some of the research while you were on placement, so you were just extending and looking deeper into what you knew.
(Natasha, IV3)

It seems from the comments, however, that this is at least partly a strategic interest in theory, driven by a forthcoming assessment.

4.4.3. Sources of learning

By the time of this second assessed placement in April, reflective diaries are notable for revealing a greater acknowledgement of university influences than those in the autumn. Four participants spontaneously cite specific university sessions (planning, assessment, numeracy) and a fifth refers to the library service that students were taken to as part of an induction programme. Interviews at this stage also testify to the continuing relevance of university sessions to practice.

> *Things like theories of learning and the school as a learning community, you need to know things like that and have that background so you're not just walking in thinking, why have they done that, why is this that way?*
> (Tracey, IV2)

The respondent validation carried out with case participants at this stage further emphasises the role of university as an important forum for retrospective sense-making and a mid-placement day away from school is singled out as having been particularly helpful:

> *Sharing and having a chance to reflect and look back and have ideas on what you might have done in that situation is really, really useful.*
> (Fay, GV)

By Placement Two, there is a strong feeling of the value of both pieces of Masters work (usually referred to as 'Level Seven'), by then completed. All case group students discuss the benefits, largely in terms of the freedom to choose topics of personal interest and relevance.

> *I think theory that you pick up from both of the Level Seven assignments would definitely be useful just to inform practice.*
> (Fay, IV2)

> *I can use things that I've researched [on boys' writing] within the classroom now so it is incredibly helpful.*
> (Bethany, IV2)

> *This Level Seven assignment, this one on talk, you don't realise that you're giving, that you're not giving the children time and it influences your practice.*
> (Natasha, IV2)

During Placement Two, despite the higher teaching load, there is much less direct emphasis given in interview responses to personal experience: this is only mentioned explicitly by three participants. Instead, the relationship with the mentor remains pre-eminent. Feedback through informal dialogue, advice and support, as well as formal lesson appraisals, is valued and there is a sense of a burgeoning professional rapport. Differences in mentoring style are

noted; in at least two cases, a new perspective on the previous mentor is evident:

> *It surprised me how my first mentor behaved…I've got really two opposite ends of the spectrum.*
> (Fay, IV2)

Freedom to experiment, try out ideas and work independently is particularly valued on this final assessed placement:

> *My mentor, she's just been brilliant. She's given me opportunities to be on my own with them.*
> (Tracey, IV2)

Most significant, and perhaps surprising, in this relationship, however, is the importance still attached to observing the mentor, even at this late stage. There is a growing appreciation of the subtleties of practice. At a time when students have taken over almost the full teaching role, one might have expected observation to have been superseded by learning from experience, but it appears this is not the case:

> *To see another teacher being effective in their teaching style is just brilliant.*
> (Bethany, IV2)

These mentions of observation are in contrast to the absence of references at this time to in-depth conversations with mentors about practice, though it would seem that this is not an expectation:

> *It's also just watching and observing. There are some things people could never say to you.*
> (Nick, IV2)

Indeed, the mentor's influence is again largely absent in the reflective diary entries, alluded to by only one student. The focus of reflection is on the students' own decision making. With a new sense of perspective, students show a strong awareness of differences between schools:

> *I think having different practices makes you realise that every school is different.*
> (Natasha, IV2)

The other theme emerging at this stage is a greater recognition of wider learning opportunities within school. Teamwork is discussed and all participants recognise the value of looking beyond their own classroom to learn from other staff and fellow students:

> *As brilliant as my mentor is, I'm actually learning from other people from within the school as well and TAs: phenomenal actually.*
> (Bethany, IV2)

4.4.4 Linking learning and making sense of experiences

In contrast to the somewhat disjointed experiences of the first semester, and despite some lingering feelings of separation between university and school, there is a clear feeling of things falling into place at this stage:

> *I can look back on sessions that we've had at university now and think this is where it fits in and this is where I can use it. So it's just that kind of, because there is that time gap between the two, it's actually trying to match things up.*
> (Bethany, IV2)

> *I've really started to understand how important the [university paperwork] is there and how it can be used to my advantage.*
> (Nick, IV2)

The course makes much more sense as a whole, though this understanding has come about gradually, rather than with the moment of epiphany Tracey had expected at the outset. The structure of the course is seen to work well and the balance and interweaving of school and university experiences is felt to be about right:

> *[After first placement], you've got something real and tangible that you can pin theory on, so I found the time between doing the first teaching block and then coming back…much more useful.*
> (Fay, IV2)

Reflection remains very important. The thought process, if not the writing up, has now become ingrained on this final placement as a form of everyday practice, moving from a prescribed task to a natural process:

> *I am constantly reflecting after each lesson…Going back wasn't something I'd thought of and didn't know that it was going to be a big*

part of my role but it's such a massive part and can't be underestimated really.
(Bethany, IV2)

I find reflection itself really easy because I do it all the time. It's the writing it down. I think it's really difficult.
(Tracey, IV2)

This reflection is, ideally, a collaborative process too. At the end of the course, participants emphasise that the opportunity to make sense with peers has been a central feature of the university sessions. Once again, the diary entries show this implicitly through the decision making and justification which is articulated. The required knowledge is seen to have come from a variety of sources: prior experiences, personal research, observation of pupils, existing subject knowledge and university sessions. Links to university are more apparent than in Placement One, as seen in Tracey's entry:

I feel that university sessions have had a particular emphasis on making learning relevant to children, which I hope was something I achieved in this lesson.
(Tracey, RD2)

Notable in the validation discussion on the final day of the course is the way in which a new, empowering way of thinking has been fostered by experiences on the PGCE. Tracey emphasises the importance of the critical thinking that has been practised and how this will relate to forthcoming educational initiatives:

I think it will be really relevant when all this new stuff comes in and we'll all be thinking critically about it rather than just accepting it.
(Tracey, GV)

4.4.5 Summary of Phase Three

In Semester Two, students show a growth in confidence and begin to feel like teachers. The focus in the classroom shifts to the pupils and to learners' needs. There is greater ownership of knowledge, which is thought of as being fairly situated. Theory is acknowledged as being a positive influence on practice, but this is seen as largely subconscious. In the second semester, learning from university is mentioned to a greater degree in practice and university is seen as a safe learning space. Many learning opportunities are recognised in school, most notably learning from the mentor and continuing to observe others. The second placement is the period in which links are made most easily and the course comes to be thought of as a coherent whole. This is helped in part by features of the course such as the additional placements and the impending *viva voce*. Reflection at this point has become a natural, everyday process.

4.5 Phase Four: post course, first term as NQT

Phase 1	Phase 2	Phase 3	Phase 4
Immediately pre-course *July-Sept 2011*	First placement / end Semester 1 *Nov 2011-Jan 2012*	Second placement / Semester 2 *April 2012-June 2012*	Post course, first employment *Sept 2012-Oct 2012*

4.5.1 The student teacher as a learner

Reflecting on the experience as NQTs, students are positive about the learning journey and the eventual outcome:

> *When I look back, the amount I've learned has been more than anything I've ever learned in my life.*
> (Nick, IV3)

> *I've come out the other side and I'm qualified and I do feel like I know what I'm doing, which is nice.*
> (Fay, IV3)

There is recognition of how far they have come and how much they have learned. The complexity of teaching, the workload and the impact of the relationship with the mentor are all identified prominently. For most, there is also an acknowledgement of how they may have initially underestimated the complexity of teaching:

> *It just isn't as straightforward as I perceived it would be.*
> (Bethany, IV3)

> *[My initial view] was very much narrow-minded, very, I don't know, a little bit cocky really.*
> (Nick, IV3)

I think I had the right idea but I just think I was coming into it completely blind really.
(Tracey, IV3)

There is a strong sense of the fluctuations in confidence during the past year, both in terms of the perceived relevance of what has been learned but also emotionally. Metaphors abound: 'rollercoaster', 'whirlwind', 'highs and lows' and 'short, sharp shock'. Natasha sums up the learning process in terms that are far removed from the unproblematic pre-course expectations:

It's been a long journey: ups, downs, all the time and it's like an emotional roller coaster because you feel like you can cope with it one day, some days it's hard stuff.
(Natasha, IV3)

In contrast to the subconscious, nebulous process of making sense described during the course, participants are able retrospectively to chart the learning process fairly coherently through the graph activity and to connect moments of development to landmarks on the course such as assignment deadlines or new school experiences.

4.5.2 Teacher knowledge and the place of theory

As NQTs, the case participants are less likely to stress individual facets of teacher knowledge but instead seem to have synthesised these into a clear focus centred on responding to pupils' needs. Behaviour management remains high on the agenda, but Nick sums up the shift as being away from tips for classroom management towards:

Understanding individual children and getting to know what makes them tick and what their interests are and then you can better match what you

need to get across to them and match their learning to the curriculum and match the needs of the curriculum to them.
(Nick, IV3)

Professional knowledge is seen as dynamic with a perceived need to keep up with developments. In their new role, a note of accountability also emerges. The enormity of taking responsibility for the routines of a class and being seen as a teacher seem to weigh heavily:

It being my class and my responsibility solely, it just seems so huge.
(Bethany, IV3)

Because I'm doing supply, they don't see you as an NQT, they see you as a supply teacher and I feel like saying, this is only my second day I've been teaching properly.
(Tracey, IV3)

The journey, therefore, has seen a definite shift in emphasis towards the learner's individual needs and a growing appreciation of complexity, but no rejection of the existence of a professional knowledge base specific to teaching.

As practising teachers, theory is now understood as a complex multi-faceted form of knowledge, derived from a wide range of sources, such as books, the school itself, union publications and the internet. Participants seem well equipped to continue to develop their expertise as qualified teachers.

These NQTs continue to recognise the purpose of theory in justifying practice. The sharp peaks during training, often corresponding with university sessions and assignments, may have passed, but the value of theory is recognised more than ever. It is described now as a 'natural thing' (Tracey) and there is a sense of theory and practice being intertwined, operating 'simultaneously' (Natasha) and 'concurrently' (Fay).

> *I think theory is being more important to me now than it was when I started the course.*
> (Bethany, IV3)

> *I'm focusing on practice, practice, practice, but obviously being informed by theory, so really theory should be up there as well with it.*
> (Fay, IV3)

> *So that's where your practice comes into play because you're using the practice to, in a way, critique the theory to see what fits your class.*
> (Natasha, IV3)

While not necessarily at the forefront of daily thinking, the day-to-day realities of the first term of teaching and the freedom from university influences do not seem to diminish the importance of theory in the minds of these new teachers. Nick, uniquely, seems to revert to a rather more positivist view of theory, somewhat at odds with his earlier statements. University offers:

> *the science of theory and what's been tried and tested and proved to work.*
> (Nick, IV3)

4.5.3 Sources of learning

Following the course, in the first term as NQTs, specific examples of useful taught experiences, particularly on behaviour management, are still cited. It is notable above all, however, that four of the five participants discuss how they now realise that they initially underestimated the importance of the university components of the course:

> *I can't believe how little I thought I was going to learn at uni.*
> (Tracey, IV3)

> *My actual understanding of the learning that goes on at university has developed as well.*
> (Nick, IV3)

> *[University] was a more enriching experience than I had anticipated.*
> (Fay, IV3)

Having suggested before the course that 90% of her learning would take place in school, Bethany, for example, now revises this view:

> *I would put much more emphasis towards the university. Perhaps not fifty-fifty but probably, definitely more so.*
> (Bethany, IV3)

All members of the case group assert that Masters study was valuable and, in addition to the benefits perceived earlier of knowledge of a chosen field, there is now a greater emphasis on the way that working at this level has helped to foster a different way of thinking:

> *It really makes you more critical. It encourages you to dig even deeper to stretch things just that little bit further.*
> (Fay, IV3)

> *You're not just taking things as given, you're sort of questioning how things are.*

(Bethany, IV3*)*.

This is an echo of the respondent validation through a focus group at the end of the course, in which one participant states:

> *I think that [Masters study] will be really relevant when all this new stuff comes in and we'll all be thinking critically about it rather than just accepting it.*
> (Tracey, GV)

With the benefit of hindsight, the greatest impact of learning at university remains the opportunity to reflect on practice: university is a space, both literally and figuratively, away from the day-to-day demands of the classroom, where students can make sense of experiences:

> *I do think university is very important because it gives you time for your reflection.*
> (Natasha, IV3)

> *We were learning and getting ideas of practice from each other, which was really nice, and I don't think you could really successfully go through your PGCE in your own little bubble.*
> (Fay, IV3)

The suggestion overall is that university learning has come to be appreciated more over time. As well as offering the expected ideas to apply in the classroom, there has been a largely unanticipated role in fostering a different and powerful way of thinking about practice.

The case group participants nevertheless continue to see school as having been the central feature of the PGCE process and the mentor's role in this remains prominent in their thinking. Additionally, they are now able to recognise that, when on placement, this was an all-consuming experience. The choice of words from one participant illuminates this vividly. Being on placement involved:

> *just submerging yourself in school and absorbing different things.*
> (Tracey, IV3)

In retrospect, it is recognised that the two placements were very different: the first was about survival, whereas the second was a much more coherent experience where many ideas fell into place and Tracey's comments highlight the contrasts clearly:

> *I think the first placement, when I look back at it, although I enjoyed it, it seems more messy and I wasn't really sure what I was doing. Whereas in my second placement everything was more aligned and I could sort of pull things together.*
> (Tracey, IV3)

> *[On first placement] I was so overtaken by trying to survive really.*
> (Nick, IV3)

> *[On the first placement] I think I was just trying to get through it in a way. But second one – I can look back and think I was much more aware of thinking and ideas and practice than I was in my first one.*
> (Fay, IV3)

The value of ongoing observation of others throughout the year and not just at the start of placements is stressed once again and it seems that observation takes a different form later on in the experience. Participants mention, for example, having a greater awareness, a trained eye and the ability to notice more:

> *I think, as you develop through the course, I think you become more aware of what you're looking at and that's how you come to look at different things.*
> (Natasha, IV3)

In keeping with the increasing focus on wider sources of learning, there is also an appreciation of the influence of the extra, non-assessed 'Enhanced Placement Opportunities' (EPOs) in settings, such as special schools, designed to broaden the students' horizons. These are mentioned by all participants as being valuable and three specifically suggest that this experience has caused them to seek out theoretical knowledge in order to understand what they have experienced.

> *I think that experience [in a special school] was so different from anything I've ever seen, it made me want to find out, using the theory, why the strategies had been chosen that they used there and if there was anything I could then apply to my own practice in the primary classroom.*
> (Nick, IV3)

> *The theory wasn't something I was thinking about at the time, but it would be interesting to go back and do that and think and look at what was underpinning the practice.*
> (Tracey, IV3)

I think I did actually think more about the theory because I was in a multicultural setting or special needs setting.
(Bethany, IV3)

As anticipated before the course, school experience has been an intense and powerful learning experience but this learning has taken unexpected forms not all of which are apparent in publicly presented accounts such as essays and written reflections.

4.5.4 Linking learning and making sense of experiences

Reflecting during their first term as qualified teachers, participants argue strongly that the programme was well designed and do not suggest any particular changes. Looking back, it is felt that links were easy to make and this is clearly articulated by all five participants:

I don't think it was particularly difficult to make links between uni and school because the university team was very vested in what we were doing in school.
(Fay, IV3)

I have to say I had no challenges really with the making links between university and school.
(Bethany, IV3)

Things just seemed to fall into place and make sense at the time they were given.
(Nick, IV3)

I think by having practice and university and practice, it enables you to switch properly.

(Natasha, IV3)

I do just see it as one continuous journey, which I suppose shows how it was linked. It's not like I think uni, school, uni, school. It was a smooth sort of ride.
(Tracey, IV3)

Interestingly, this seems a far less complicated view of the course than was expressed at the time. This 'smoothing over' could be attributed to students having a greater appreciation of the whole from the vantage point of a qualified teacher. However, it also perhaps underlines the value of this longitudinal study, which allows views to be solicited, from pre-course onwards, at the time, rather than just retrospectively.

When asked about national trends towards more school-based training, the response is not particularly positive: while school has been the central learning experience, the value of university is very clear and it is difficult to see what could feasibly be dropped:

The time at uni would have to be so much more concentrated because there's nothing you could miss out.
(Tracey, IV3)

You're going to have to squeeze something out of university time. I don't know what you could stand to lose.
(Fay, IV3)

Furthermore, the university's role as a reflective space is again underlined, the implication being that this stepping away from practice, perhaps physically as well as mentally, may need to be incorporated in school-based provision.

If you were in school constantly I think the value of the stuff you'd learnt would decline because you wouldn't be able to consolidate it as much.
(Nick, IV3)

There has been no evidence at any stage of the process of mentors drawing links between theory and practice, for example. As one participant now puts it:

> *Teachers don't tend to chat about educational theory over lunch.*
> (Tracey, IV3)

Nevertheless, now that the explicit requirement to provide evidence of reflection has gone, it is notable that reflection remains at the heart of practice:

> *[Reflection] is such a massive part of being a teacher and it is just not something I would have even known about prior to the course.*
> (Bethany, IV3)

Even Nick, who expressed surprise at the time of the first placement at the amount of reflection has come to appreciate it much more fully:

> *At the very start, probably during PT1, I felt that it was a bit for the sake of just doing the essay at the end that we did it and then, by the end, I sort of saw the meaning of it and how, in turn, it sort of charted your learning journey.*
> (Nick, IV3)

The value of this reflection is seen in terms of target setting and moving one's practice forward, on a short term basis. As Fay puts it:

> *It was good to be able to look back and think: How did I do that? Why did I do that? What would I do differently?*
> (Fay, IV3)

Longer term reflection, back at university, centres on getting and advice and tips to apply to comparable situations in the future. There is some feeling that this should take a personal form and that, while necessary for some, prescriptive ways of recoding reflection are not always helpful. This possibly

suggests a place for giving greater ownership of the process to students as they near the end of ITE.

> *It is difficult for me to see it as something you have to sit down and do when I think it should just happen naturally.*
> (Tracey, IV3)

> *I think if you were able to do it without writing it down, then it was a bit frustrating having to write it down because you're thinking, I'm doing it all the time in my head.*
> (Fay, IV3)

The PGCE is considered as good preparation on the whole for becoming a teacher, though there is an acknowledgement that nothing can properly prepare for one for all the challenges encountered as an NQT:

> *In terms of being prepared for what to expect, it's been really brilliant actually. You can't be prepared for everything obviously, because that's the nature of the job.*
> (Tracey, IV3)

> *In a lot of ways the PGCE felt so short…So I think I was prepared for some things, just not the day-to-day running I suppose.*
> (Bethany, IV3)

I think that the PGCE did really get us ready as well as it could have done but there are some things no amount of training can get you ready for.
(Nick, IV3)

Linking sources of knowledge has been a complex process of shifting understanding. Reflection has been at the heart of this and, on the whole, there has been a sense of coherence. By the end of the course, the memories of any struggles have largely receded and the view of the experience as a whole is overwhelmingly positive. As Natasha sums up:

Somebody said to me it will be the best year of your life and it actually has been.
(Natasha, IV3)

4.5.5 Summary of Phase Four

There is recognition, as NQTs, of the huge progress made and the fact that the journey has seen notable peaks and troughs of emotion. The complexity of the process and of teaching itself is strongly acknowledged by this final stage. During the first term as teachers, participants seem to have synthesised different sources of knowledge; there is acknowledgement, perhaps more than ever, of the importance of theory and a perceived need to keep up with new developments. Although teaching in school, particularly on the second placement, has been the most important experience, the way of thinking fostered by study at Masters level and the reflective space offered have been important, unforeseen contributions from university. There is a feeling that university was very much underestimated as a source of learning. By the end of the course, as new teachers, the programme is recognised as being well designed with a good balance of components. Retaining university study alongside teaching experience is seen as crucial. Participants remain positive

about reflection and have taken personal ownership of this. Although the PGCE is as good as it can be, nothing can fully prepare one for the new challenges of being an NQT.

4.6 Outliers and individual differences

Whenever my early analyses of findings from the group as a whole were presented to participants (the jointly constructed theory definition arising from the focus group; the end of course respondent validation meeting; the published article on Phase One of the research), no concerns were raised. It seemed that participants felt themselves to be well represented by my summaries and there appeared to be strong consensus within the group. Despite this, it is important to seek out actively any deviations from the case narrative, however minor. These have been presented in the chart in Appendix 4.3 and a small number of points are highlighted here for consideration.

When considering the participants' understanding of the nature of theory, two participants had views which, while not contradicting the overall case position, are worthy of note. Bethany, uniquely, shows an awareness of the complexity of theory from the very start and is the catalyst in the focus group exploration of this idea. Though acknowledging the importance of research as a source of theory, she notes that it cannot be taken as 'gospel truth' (p.120). Although she reaches a similar position to the other students with a sense of ownership of theory (p.168), her views change the least over time. These more nuanced views are interesting when considered in the context of Bethany's background. She had been a research scientist prior to the PGCE and so her relationship with research and subsequent theories differed to that of the other participants: not only did she have greater experience, but this was likely to have been based in a positivist tradition, at odds with much educational research she would be exposed to on the course. It seems that Bethany also had the least prior classroom experience of the group and so perhaps her keenness to focus on practice is all the more understandable. This serves as a reminder of the importance of taking into account and building on the diverse back stories of beginning students.

Nick, too, has a slightly different relationship with the concept of theory in education. Alone among the case group, he explicitly raises the question,

before commencing the course, of a possible difficulty in transferring theory to practice (p.125) and he still speaks in these terms on his second placement. Although his journey reflects that of the others, in the broadening of his views, his embracing of theory is more muted and, though valued, theory is a little less prominent as an NQT. Similarly, there is a degree of ambivalence about reflection until later on in the process compared to his peers. Interestingly, he is the only participant who seems to revert to a sense of theory as fact. Despite his earlier recognition of theory as open to interpretation (p.135) in the focus group, in his final interview he describes his current understanding of learning at university in more scientific terms (p.166). It would seem that initial preconceptions are indeed resilient and durable.

Turning to the learning journey more specifically, other minor anomalies are visible. Fay is unusual in her unhappy relationship with her mentor during the first placement and this is raised on a number of occasions thereafter (p.158). Tracey is distinctive for the prominence given in her answers to personal and affective factors in learning to teach. She is the most vocal in reporting emotional turmoil in the first semester and her comments before the course in which she questions whether anyone could become a teacher and anticipates a moment of sense-making 'epiphany' (p.116) are examples of the kinds of preconception which could usefully be uncovered and challenged in the early weeks.

4.7 Whole cohort triangulation

A degree of change can also be seen when the whole PGCE cohort's questionnaire responses are compared in terms of the level of agreement with various statements before (start of Phase One) and at the end of the course (end of Phase Three). Table 4.2 shows the statements ranked by mean, in order of agreement.

Pre-course (July 2011)	End of course (June 2012)			
rank	statement	mean	rank	stateme
1	**6** In order to improve their practice, teachers need to look beyond their own classroom.	**3.76**	1	**2** Becor involves *what* tea it.
2	**3** Teachers need knowledge about principles of learning and teaching that go beyond any particular school and that can be applied in a range of contexts.	**3.74**	2=	**1** Teach speciali all teach
3	**2** Becoming a good teacher involves understanding not only *what* teachers do, but *why* they do it.	**3.64**	2=	**3** Teach principle that go school a a range
4	**1** Teaching, as a profession, has a specialist body of knowledge that all teachers need to be aware of.	**3.59**	2=	**6** In ord practice beyond
5	**9** It is important for teachers to research their own classroom practice.	**3.38**	5	**9** It is im researc practice
6	**5** Study at university is important in becoming a teacher.	**3.23**	6	**5** Study in becor
7	**8** Teachers should draw on educational research findings to help improve their own classroom practice.	**3.15**	7	**8** Teach educatio help imp practice
8	**10** Studying Education at Masters level has benefits for a teacher's classroom practice.	**2.97**	8	**10** Stud level as classroo
9	**7** Learning to teach is mainly a matter of practice and personal experience.	**2.80**	9	**4** The k require school.
10	**4** The knowledge that teachers require is learned mainly in school.	**2.68**	10	**7** Learn matter o experie

Table 4.2: Questionnaire statements ranked in order of mean level of agreement, pre and post course

Although there is considerable stability in the views and little dramatic change over time, a number of observations may be made:

The change in the highest ranked statement is potentially of interest. Before the course, it is*:*

In order to improve their practice, teachers need to look beyond their own classroom.

At the end of the course, it is:

Becoming a good teacher involves understanding not only what teachers do, but why they do it.

This could be seen to indicate a shift from merely seeing practice to understanding it and indeed this statement, by the end of the course, has risen most in the rankings, achieving the highest overall level of agreement at the end of the course. The standard deviation figure (shown in Appendix 3.16) is the lowest of all of the twenty scores, suggesting a highly coherent response with few outliers. The emerging view, then, is of a growing appreciation over time of the need to understand underlying principles.

While retaining its lower position in the ranked order, the statement with the highest rise in mean agreement level by the end of the course is*:*

The knowledge that teachers require is learned mainly in school.

In keeping with the case group, therefore, the wider cohort has been affected very strongly by classroom experiences. Interestingly, however, this statement and Statement 7:

Learning to teach is mainly a matter of practice and personal experience

both of which refer to learning on the job, have the highest standard deviation figures in both sets of data. This indicates a slightly more ambiguous response. It seems clear that school experience is seen as important but perceptions of its position in the process are somewhat mixed.

Statements 5, 8 and 10, referring to the value of university study, research findings and Masters work respectively, have stayed in the same position but all have slightly higher levels of agreement post course. It is notable, therefore, that, in the face of the powerful influence of school experience, these aspects of the PGCE have seemingly remained at least as important as ever. The slight exception to this pattern is the statement about researching one's own practice, the mean agreement with which has dropped, though only slightly. Students perhaps have yet to see themselves as creators, as opposed to consumers, of theory.

A further statement showing a rise both in ranking and mean agreement is:

> *Teaching, as a profession, has a specialist body of knowledge that all teachers need to be aware of.*

It is intriguing that, despite exposure to the complexities and uncertainties of education, there remains a faith in some definable knowledge base.

Overall, the sense emerging from the case group, by the end of the study, of the predominant position of school experience is borne out by the wider cohort. So too, however, is the sustained, and even enhanced, perceived value of theoretical aspects of learning.

Chapter 5: Discussion

5.1 Introduction

As an instrumental case study (Stake, 1995), the ultimate value of this research hinges less on the journeys presented in the preceding chapter than on the underlying issue of interest. Thomas (2013) sees theory-building as developing 'a model that somehow 'unwraps' the subject for the explication of the object' (p.597). Seen in this light, the experiences of the subjects: Bethany, Fay, Natasha, Tracey and Nick are of value chiefly as a means of illuminating the object of the study, which was articulated in the original aim:

> *To understand the preconceptions held by students about the relationship between theory and practice in learning to teach, the way in which these conceptions develop in the course of the journey to Qualified Teacher Status and the implications of this for teacher educators.*

Returning to the claim that a theoretical underpinning might be seen as a pre-requisite for professional legitimacy and kudos within education (Shulman, 2004; Thomas, 2007), the journey of understanding undertaken by this group of students has implications for the kinds of emergent professionals they have become. The argument within this chapter is that, in the face of increasingly school-based ITE within England and an apprenticeship view of teacher training (Gove, 2010) which might imply a marginalisation of the HEI provider, new opportunities exist for innovative forms of partnership. Theory remains an important and valued facet of teacher knowledge for these students, but its positioning in the overall experience and the role of the university in this process may need to be reconsidered.

5.2 A knowledge base for teaching: capitalising on uncertainty

Underlying the issue of learning from theory and practice is the question of how teacher knowledge itself is conceptualised. As they embark on the course, participants show a firm belief in the existence of a distinctive body of professional knowledge for teachers. To a degree, this might be expected at this stage, as a corollary of their stated belief in teaching as a profession, Edwards *et al.* (2002) having argued persuasively that identifying 'a body of knowledge unique to those practising' (p.30) is one of the hallmarks of the professional. This belief contrasts sharply with the case frequently made for education's lack of just such a body of knowledge (Schön, 1983; Neufeld, 2009), but also arises at a time of considerable standardisation of teaching performance in England through a set of universal teaching standards (DfE, 2012a). It is interesting to consider, therefore, what students feel constitutes this knowledge. The early emphasis, sustained to a certain extent into the first placement, is on curricular and procedural knowledge, along with tried and tested strategies and activities. This is strongly reminiscent of the discourse of the competent craftsperson, centred on universal notions of teacher performance, identified by Moore (2004) and exemplified by Fay's comments concerning delivery of the curriculum (p.118). Rather than rejecting such beliefs as naïve, it seems that an opportunity may exist to explore and challenge such preconceptions at the outset of training, in order to establish a framework for an ongoing dialogue, which problematises teacher knowledge. Comments later on in the year (p.163) about a growing appreciation for the complexity of teacher knowledge provide evidence that students recognise huge shifts in personal understanding and so a more overt, structured 'conversation' may be valuable.

As might be expected, there is a shift in understanding about knowledge for teaching over time and students very quickly move beyond the initial preoccupation with curriculum and engagement. Seemingly triggered by their school experiences, participants increasingly move towards a view of teacher

knowledge that is far more situated and oriented to pupil needs (p.132). Knowledge of subjects *per se* and age-appropriate pedagogy become inextricably linked and transformed into a new form of expertise, reflecting Gess-Newsome's (1999) description of the transformative creation of Pedagogical Content Knowledge. By the time they are newly-qualified, the participants' focus has become the subtleties and complexities of particular settings and individual children. The fact that this interest in pupil learning, far from being new, is actually evident in personal statements written up to a year before commencing the course (p.118), is noteworthy. Rather than naivety, the preoccupations at the onset of training perhaps reveal instead 'survival' instincts triggered by the prospect of the training process itself and, in that sense, a brief regression.

In many ways, students' knowledge quickly begins to bear the hallmarks of the highly contextualised 'craft knowledge' outlined by Hagger and McIntyre (2006). This is reinforced by the shifts of emphasis between first and second semester from planning to assessment (or from teacher-oriented to pupil-oriented perspectives) and by the increasing evidence in diaries of context-specific decision making. While Hagger and McIntyre largely reject universal ideas in favour of this situated knowledge, there may still be value in helping students to identify common themes and principles arising from their diverse experiences. The opportunities for comparison afforded by contrasting placements and peer discussion suggest that co-constructing a personal view of specialist knowledge for teaching could be a fruitful exercise, revisited throughout the process. Despite this shift to the situated and specific, the whole cohort questionnaire actually shows increased agreement by the end of the course with the idea of 'a specialist body of knowledge that all teachers need to be aware of'. This suggests that students may be receptive to the sort of structured, university-led reflective process advocated by Korthagen (2010a). At a time when the very need for a teaching qualification has been called into question (Boffey & Helm, 2013; Gove, 2014), this exploration of distinctive professional knowledge seems a particularly important issue for new teachers to consider, as there are implications for the nature of the profession itself. A more convincing case could be made to beginning students about ITE

as preparation for thinking as a professional with a vocation, rather than as the means to be a credible and competent technician in the short-term. As exemplified in the lines of questioning, bound up with these issues of *what* teachers know are considerations of *where* and *how* this knowledge arises.

5.3 Conceptions of theory as a source of teacher knowledge: towards ownership of ideas

A significant journey of understanding and one that has important implications for the university's role concerns the nature of theory. Participants' early views reveal a somewhat narrow conception: theory is seen as formal, created by others and, with the exception of Bethany (p.120), largely accepted without critique. Consistent with the belief in a distinct body of knowledge, theory thus strongly resembles Eraut's (2007a) description of high status codified knowledge, closely controlled by those in academia. However, despite the frequent representation of theory as perennially remote from practice in the minds of students (Berry, 2008; Korthagen, 2010a), the participants in this study show little evidence of such compartmentalised thinking. Indeed, the use of 'theory' as a separate term is notable chiefly by its scarcity in pre-course interviews. Despite this being the main focus of the questioning, from multiple angles, in five interviews, the actual word is used by only two participants (seven mentions in total). Any view of separate forms of knowledge as problematic is barely evident in either interviews or personal statements. It is difficult to avoid the suspicion that teacher educators may unwittingly establish, or at least perpetuate, this dichotomy, as suggested by Laursen (2007) and that a more nuanced view of sources of teacher knowledge could be shared with these new teachers. The blurring of traditional boundaries through a greater involvement of schools in wider forms of student learning beyond classroom teaching may offer just such an opportunity.

Conceptions of theory as a component of this knowledge undergo considerable change during the first semester. The interchange during the focus group

following the first school placement (p.135) is very revealing: a co-construction and, for some participants, personal transformation of understanding appears to unfold. The resulting acknowledgement of uncertainty and multiple perspectives hints at a broader interpretation of theory. This seems to stem from a number of sources: personal experience of the complexities of teaching; university materials and seminars and the influence of peers. From this point onwards, increasing confidence in this view of theory as provisional is evident. Greater ownership and a willingness to adapt ideas in light of specific contexts are evident and by the time these participants are NQTs, Natasha is talking explicitly, for example, about using practice to critique established theory (p.166).

Nevertheless, there do seem to be limitations to this journey of development. For example, the ideal of the reflexive, theorising teacher envisaged by Segall (2001) as the product of a new form of 'defamilarising' ITE is not fully realised. Participants' responses to the notion of themselves as theorists, though positive, are somewhat tentative. Similarly, in the cohort survey, it is notable that, while support for the use of existing theory and research increases, agreement with the statement about researching one's own practice decreases very slightly. It seems that students have yet to be convinced about this idea, perhaps because they do not recognise the informal opportunities for theorising they have already had, through academic assessments and reflection, for example. Given the potential, hitherto largely unrealised, for teachers as researchers as a way of bridging the perceived divide in theoretical and research-based knowledge and also developing personal expertise (Lampert, 1999; McIntyre, 2005), this might be a particularly valuable area for further development. The locating of teacher education more extensively in the school is ambiguous in this sense. While Medwell & Wray's (2014) arguments for small-scale action research by student teachers could be facilitated by increasingly school-based ITE, conversely, the very academic grounding required to carry out rigorous enquiry may be diminished in the process.

Perhaps most striking is the consistent value attached to theory as a source of learning, a finding running contrary to the scepticism or ambivalence towards

theory often reported in the literature (Segall, 2001; Hascher *et al.*, 2004; Hobson *et al.*, 2008). From initial interviews and questionnaires, participants are aware of the potential contribution of theory in the form, for example, of using others' research findings and, to a lesser degree, carrying out their own research at Masters level; as these students proceed through the PGCE course, their disposition towards the potential contribution of theory to their practice remains positive. The perceived status of theory fluctuates in line with the shifting, periodic demands of academic assessments and teaching practice and it is little in evidence in the personal reflections written at a distance from university. However, there is a strong sense of theory becoming increasingly and subconsciously subsumed into an integrated, multifaceted body of expertise (p.166). Most notably, as newly-qualified teachers, at a time when university influence might be expected to be diminished during socialisation into school practices (Haggerty & Postlethwaite, 2012), it is notable that attitudes to theory are more favourable than ever. Although the possible reluctance of students to express negative views about theory to a researcher who is simultaneously a tutor, noted by Smith & Hodson, (2010), must be acknowledged here, the sustained interest in theory is also borne out by the anonymous responses to the wider cohort survey. They show, by the end of training, a slightly higher level of agreement with the statements relating to this issue.

Documenting this journey further into the early stages of employment is beyond the scope of this study, but it would suggest that early-career teachers may be receptive to prolonged exposure to theoretical ideas. Among the cohort as a whole, the need to understand the rationale behind teachers' actions assumes greater importance over time, receiving the strongest level of agreement of all in the end of the course survey. Indeed, to return to Hobson's (2003) categories of orientations to theory, the shift might best be characterised as a move from the 'education-oriented apprentice', seeking theoretical background to enhance practice, towards the 'understanding-oriented learner' whose practice is informed by theory. This is in contrast to Hobson's finding of a majority in the former category and may possibly reflect a change in the profile of candidates over the last decade, as postgraduate ITE

has shifted to Masters level. Today's emerging NQTs, therefore, seem well equipped for an enquiry-based approach to their practice.

When considering these attitudes, the sequence of theory and practice is important. In contrast to provision of theory early on, as a precursor to practice, later characterised as an overload that left one participant 'reeling', theory seems to be particularly useful retrospectively. Following the first assessed placement, for example, there is evidence of participants being able to make sense of experiences through reference to theory, as seen in Nick's comment on p.154. The second placement, by which time the interplay between school and university is more established, is firmly seen as a period when the various course components seem to fit together as a coherent whole for the first time. This greater appreciation of theory following some practice is very much in keeping with the findings of Hobson *et al.* (2008) and also suggests a real value for models of student teacher learning taking experiences from practice as their starting point (Korthagen, 2010a). Indeed, to go further, this gives credence to calls for a move away from practice in separate 'blocks' of experience and towards a very frequent interspersing of teaching with opportunities for theory-based analysis (Darling-Hammond, 2006; Waege & Haugaløkken, 2013). The perceived utility of theory is also linked closely to the characteristics of learning within two distinctly different settings for student teachers: school and the university.

5.4 Learning in school: learning *to* teach or learning *about* teaching?

Calderhead & Shorrock's (1997) distinction between understanding and performing teaching is particularly pertinent when the participants' conceptions of learning within school are considered. In keeping with other studies (Hobson, 2003; Hagger *et al.*, 2008), school experiences are expected from the outset to be the main sources of learning. Pre-course expectations, emphasising fact-finding, learning through mimicry and an uncomplicated

relationship with an expert teacher as a host, could be seen as simply unsophisticated. Alternatively, as pointed out by Van Velzen *et al.* (2012), this could instead be interpreted as the reasonable expectation of a structured induction into a profession, through which experienced practitioners share expertise with novices and professional learning, as opposed to practice, is the priority. By the end of the first placement, the interest in school has shifted from mimicry to personal experience. However, as Hascher *et al.* (2004) have argued, teaching practice does not necessarily equate to learning in school for ITE students. As if to emphasise this, there appears to be a renewed appreciation during the final assessed placement and again in first teaching posts for seeing others' practice. At a time when students are by now teaching for almost all of the week and one might assume that practice would be the sole concern, much value is still attached to observation (p.158). Participants suggest that they are now seeing differently, through the lens of their own practice. This heightened awareness allows them to note and reflect upon the subtleties of practice in a new and more powerful way. Instead of a model of school experience in which observation is merely a precursor to, and soon superseded by, the 'real' business of teaching, it seems that the opportunity to critically examine others' practice, as well as one's own, has an important role towards the end of school placements and could usefully be linked to theory.

The mentor, little considered before commencing the course, quickly assumes centre stage in the students' experiences and remains a powerful presence thereafter. Discussion of the mentoring role is dominated by relationships, demonstrating the overriding need for socialisation into school practices noted by Allen (2009) and perhaps also an awareness of the mentor's simultaneous role as assessor (Skinner, 2010). In the first semester, recognised more generally as a struggle for survival, concerns centre on reassurance and support; in the second, in keeping with the heightened sense of coherence and confidence, a greater focus on professional relationships and autonomy is evident. This evolution is exemplified in comments on page 148. While interview and focus group conversations reflect this complexity candidly and at length, there seems to be a certain 'smoothing over' within the more considered accounts written as assessed essays and, in the case, of the

reflective diary entries, the mentor's influence is relatively unacknowledged. The mentor's influence, therefore, seems less about learning the underpinnings of teaching, whether in the form of codified knowledge or personal, uncodified expertise (Eraut, 2007a), than about the affective aspects of the process.

Hagger & McIntyre (2006) make a strong case for the value of students learning from mentors in a structured manner that goes beyond providing feedback. This study, however, bears out many of the obstacles they encountered and the view of Jones & Straker (2006) that, in reality, the mentor's role in helping students to link forms of knowledge is a rather limited one. Students show little evidence of being able to draw on their mentors' expertise in this way and no real suggestion of dialogue that might go beyond either reactive feedback or procedural advice is seen in the data. The challenges associated with teachers sharing with students their tacit knowledge and thereby fostering links to theory have been widely documented (Zanting *et al.*, 2003) and Tracey's comment about mentors not chatting about theory over lunch (p.173), though perhaps flippant, is nonetheless very telling. Significantly, however, when students are asked explicitly in Interview Two about talking to mentors in this way, there is no sense of this either being particularly desirable or perceived as a deficiency in the relationship. Students appear to have no expectation of mentors offering a justification for their practice. Links to theory, it would seem, are made either privately or collaboratively with peers (as summarised by Bethany's comment on p.137). This suggests that a greater understanding and appreciation of situated craft knowledge as a form of theory needs to be achieved during training, not only for students, but for mentors too. An enhanced role for universities in offering development for mentors alongside their students may be necessary, particularly if more student learning time is apportioned to school.

A striking extract from the data is the reminder from Fay (p.149) linking to findings by Mutton *et al.* (2010), that being a learner in school is difficult for a student, due to the constant need also to perform competently in the role of teacher. University, rather than school, is the place where one has licence to

learn and certainly a need to perform convincingly is a strong theme in the data. If student teacher learning, as opposed to practice, is to have legitimacy in school, then the focus of placements might need to change. Once again, this implies a real value for frequently interspersed episodes of teaching and other learning activity and hence a wider view of schools as sites for learning in a much broader sense. Such a move away from blocks of practice may also serve to diminish the need to conform and fit in with the prevailing practices. Particular attention might also be given to the differing characteristics of school experiences at different stages in the process: acknowledging the survival concerns of the early weeks in school and recognising the particularly fertile period late on when students may be most ready for, and receptive to, links to wider perspectives and theory. While school has proved to centre on a rather one dimensional, albeit valuable, learning experience, university learning, discussed in the following section, offers much more than students have anticipated.

5.5 Learning at university: a growing appreciation and a shifting role

As an increasing proportion of teacher education in England shifts to school settings, openings arise for the role of the university to be redefined and repositioned. For the participants, conceptions of what is offered by the HEI change considerably. Prior to starting the course, university is viewed chiefly as the provider of background to be applied in the classroom. The expectation seems exclusively to be that knowledge will be offered at university and fed forward into practice as a unidirectional process, corresponding to the 'technical rationality' model rejected by Schön (1983) and Korthagen (2010a). Although there is some limited reference to broader principles, the emphasis is on the sort of functional knowledge that will facilitate survival in the classroom. As the programme progresses, the university's role as provider of useful knowledge continues to be recognised in encounters such as interviews and the focus group (p.139), though few specific sessions are identified. Despite

the initial overload retrospectively discussed, this content is viewed positively. In contrast, the reflections written privately, away from the researcher, show much less evidence of this, though there is greater acknowledgement by the second placement. There are many possible explanations for the university's absence from these documents, ranging from interviewer effect to the more general difficulty in articulating influences on practice noted by Atkinson (2000). Taken as a whole, the impression is of some detachment from university, not just physically but also cognitively, when on placement, exemplified by focus group references to being overtaken by survival (Nick) and being absorbed in the day-to-day (Fay).

Nevertheless, as newly-qualified teachers, the importance of university study is not only reiterated, but has come to be appreciated far more than at the outset (p.167). It is not simply the amount that has been learned, but the nature of that learning and it seems that there are two, largely unanticipated, components to this. Of the academic work undertaken, it is the Masters level study that has had the greatest impact. This may be due in part to the fact that students were able to choose topics for study and is very much in keeping with findings suggesting that the value of theoretical knowledge is measured by its immediate relevance to situations experienced in the classroom: the 'test for truth', as Postlethwaite & Haggarty (2012, p.278) put it. In this case, research areas were based on interests that had already arisen from early school experiences. However, the real value of studying for these assignments seems to have been in developing the skills of professional judgement. As Tripp (2012) has argued, it is judgement, rather than an accumulation of knowledge, that is central to a teacher's expertise. Signs of Tripp's 'diagnostic' approach are evident in the developing views on the nature of theory and exemplified in the latter stages of the study in comments from Fay, Bethany and Tracey (p.167-168), echoing Turner & Simon's (2013) arguments for higher level study fostering a form of professional assertiveness. In the face of ITE centred on universal, competence-based standards (DfE, 2012a), these participants feel equipped, as teachers entering the profession, to respond in a critical manner to future developments. It may be that students educated in this way offer a vital source of new thinking to challenge the possible

conservatism of the workplace (Shulman, 2004). This is an encouraging a step towards what are seen by some as fundamental professional requirements, such as critical engagement (Alexander, 2010) and the ability to communicate the reasoning behind professional decisions (Shulman, 1986).

The other striking contribution of university, first understood after Placement One in school and reiterated all the way through to first employment, is its place as a forum for reflection. As theory comes to be increasingly valued by students, not simply as the means to passing assignments, but for its retrospective insights into practice, this represents a significant role. Participants, such as Natasha (p.144) mention the need for time to reflect and consolidate what has been learned: university seems to provide this mental space. This finding strongly supports that of Hodson *et al.* (2012), derived from employment-based routes into teaching.

Notable in the final interviews is the lack of enthusiasm for the changes nationally to English ITE, involving far more weeks spent in school (Gove, 2012). Given the value attributed by students to learning in school, one might have expected a more positive response to these developments. These NQTs see the university content as indispensable, underlining the need to ensure that broad forms of learning, including exposure to ideas from theory, can be accommodated alongside practical teacher experience in schools.

As traditional school-HEI partnerships are reconfigured in a competitive marketplace, universities may need to be more explicit about these ways of adding value to the core school experiences. The underestimation by these students of the extent of the university's role, suggests that this could be promoted more clearly from the outset. While it could be seen that the university as a separate physical place may offer a 'safer', relatively objective environment for critical examination of existing practices with peers, I would argue that this form of university contribution is less about a distinct location and more to do with the nurturing of a particular mindset, allowing for exposure to alternative perspectives. A formal, 'off the job' space may be possible in school, therefore, but, as Smith & Hodson (2010) emphasise, the opportunity

to engage widely with others and to look beyond the specific, immediate environment remains important. Given the sustained appreciation for both theory and the university shown by the participants as NQTs and, simultaneously, a need for schools to form new partnerships for CPD (Taylor, 2013), it seems reasonable to assume that an enhanced role for universities working with NQTs beyond the conventional bounds of ITE might be both valuable and timely. Evidence in the data about concerns, as NQTs, centring on professional responsibility (p.165) may offer one possible focus for this. Berliner (1988) advocates an extension of the HEI's responsibility in this way and this would seem to be consistent with the current inspection framework in England (OFSTED, 2013), which uses NQT performance as a measure of HEI standards. As articulated by Loughran (2006) and supported by the data gathered in this study, a considerable challenge exists in melding ITE experiences into a coherent whole and it is to this that the discussion now turns.

5.6 Linking learning and crossing boundaries: towards a unified view of ITE

As NQTs, participants appear to have synthesised forms of knowledge into a coherent whole: insights from diverse sources including practice, publications and colleagues all form part of an evolving body of knowledge, now sustained independently, linked to their accountability as professionals. Although the interweaving of university and school experiences is therefore seen retrospectively by all as a strength (p.171), it is important to attempt to unravel what has actually been a complex interplay of factors. Emerging from the findings above all is the importance of going beyond a focus on transferring ideas from one setting to another to look instead at experiences rooted authentically in both schools and HEIs which might draw on and integrate both theoretical and practical knowledge.

The use of reflection, embedded widely as a paradigm within ITE (Van Huizen *et al.*, 2005), is referred to largely spontaneously in the data throughout the study. Before the course begins, only Fay uses the word 'reflect' (p.126), there are limited references to sharing ideas with peers or having time to think and there seems to be little awareness of the systematic, structured or purposeful process envisaged by Korthagen (2010a). By the end of the first semester, the situation is very different: the influence of university sessions is evident in the understanding of reflection demonstrated in assessed work. Though one might suppose that the overwhelmingly positive view conveyed through this medium may be for the benefit of academic tutors, the focus group data also testifies to the perceived importance of reflection in making sense of practice and establishing links between university and school. At one level, the process seems to be a fairly functional daily task, but a second tier of what might be termed reflection-on-action (Schön, 1983) has even more impact: the opportunity, periodically, to step out of the immediate situation and reflect with peers. As the year progresses, reflection becomes a far more natural process and this prominence is sustained into first employment, despite the absence of a formal requirement for this by this point. An important question, however, concerns the form and purpose of this reflection.

Close scrutiny of the data suggests that, aside from the assessed essay, reflection seems to be associated with two strands of thought. In school, reflection centres on honing performance and target setting, as seen in Nick's comments on p.144. The emphasis is on individual lessons and small steps of improvement. When at university with other students, reflection remains chiefly bound up with reassurance, peer support and a general sharing of ideas, as mentioned by Tracey (p.139). Common to both is the association of reflection with short-term personal progress, rather than making coherent links to theory or seeking to improve practice in a more fundamental sense. Although the reflective diary entries from the second semester show the clear ability, when prompted, to make links to wider forms of knowledge from university influencing decision-making, it is far from certain that this is a habitual thought process.

The contrast between the broader understanding shown in essays and the more limited day-to-day practice may stem in part from the Record of Reflective Practice (RRP) cited by one participant (see Appendix 5.1 for example format). This document, linking reflection to target setting and specific Teachers' Standards (DfE, 2012a) may inadvertently encourage a shallow, competence-oriented process. Indeed, the very form of reflection prescribed, centred on written evidence, remains problematic for some, implying the need for greater freedom as time goes by.

As students in the second semester seem ready to see their learning and the course itself more holistically, this may be a time to promote a different form of reflective practice. Perhaps an approach to reflection centred less on daily practice and more on broader questions of emerging professional identity (Van Huizen *et al.*, 2005) would be beneficial at this stage of the course, allowing for the ongoing consideration of professional knowledge previously suggested. The confronting of emerging assumptions that has been widely advocated (Loughran, 2006; Berry, 2008) would be particularly appropriate and could take the form of the structured journey from experience, through personal theory, towards insights from established theory envisaged by Korthagen (2010a).

One example of a structured approach to establishing links between theoretical and practical learning is the use of school-based tasks. These are carried out on placement and intended as a two way process: encouraging exploration in the school setting of ideas first raised at university and allowing focused school experiences to inform subsequent seminars, workshops and assessed pieces of coursework. During the first placement, however, these seem to have limited value in fostering these links, a situation exacerbated for some by logistical obstacles such as locating the appropriate paperwork or adapting guidance for different age groups. Crucially, school and university demands are perceived as somewhat disconnected, as seen in focus group comments (p.144). Despite their title, the school-based tasks seem to be viewed very much as part of the university's world. Returning to the potential benefits of pre-service teachers as researchers (Medwell & Wray, 2014), greater ownership of classroom enquiry tasks may be appropriate. This might also

suggest a role for the 'conceptual home base' mooted by Smagorinksy *et al.* (2003, p.1428). Although their proposal for a single overarching concept may be potentially limiting, the co-construction of a small number of key concepts and values, shared and frequently reinforced across the university-school partnership may help to minimise both this sense of fragmentation and possible uncritical socialisation into prevailing practices at individual schools.

Formal reflection and prescribed school-based tasks therefore have somewhat limited value in promoting links. In order to identify the aspects of programme design more conducive to linking theory and practice and most deserving of further study, it is instructive to revisit the activity systems model discussed by Engeström *et al.* (1995) and applied to ITE by Philpott (2006). Philpott's model of the school and HEI as two distinct systems has been reconfigured in Figure 5.1 to represent students' understanding, by the end of the course, of the processes of learning in the two settings.

Considering firstly the interplay of factors in the university activity system, the most notable outcome is the very high profile accorded to peers and peer discussion, particularly prevalent in the focus group. This is related to the perception of university as a forum for making sense of teaching, linking to the contention of Hodson *et al.* (2012) that the HEI can be seen as a place of respite and reassurance. Whereas, for Philpott (2006), the object of university is to understand the theory and practice of education, I would argue, therefore, that the participants' implicit view over time of the object of university becomes something more than this: university learning comes to be about becoming 'educationally literate', in the sense not merely of understanding underlying principles, but also being equipped with the means to evaluate, adapt and employ new ideas in the future. Evidence for this can be found in the findings at Phase Four in particular, showing a growing appreciation of complexity in teaching, a developing understanding of the relationship of theory to one's practice and the contribution of Masters level study to a different way of thinking (p.168). Thinking of this as a form of literacy recalls Segall's (2001) suggestion for approaching teacher education as the critical reader of a text: rather than producing well-informed, but essentially passive, consumers of theory and practice, university experiences encourage students to develop their own critical and evaluative faculties.

Turning to school as an activity system, there is a different conception of subject and object. In keeping with Philpott's (2006) view, there is a feeling from participants of being a novice teacher, rather than student in the broader sense. Although pupil learning assumes an increasing prominence in students' thinking, participants are nevertheless able to see their own development as an object of the school placements. As previously discussed, the orientation of the responses towards getting through the day-to-day duties, fitting in with the mentor's expectations and feedback and appraisal suggest conformity and performance as the forms of development most valued here (p.140). This again supports Moore's (2004) view of the prevailing competence discourse within education and underlines the importance of the university experience as a counterbalance to this. School practices, therefore, could be seen in this system as both mediating artefacts, but also rules that introduce a degree of

constraint. Similarly, the mentor impacts upon learning in different ways. Mentoring conversations are, potentially, a valuable mediating tool but there is no real evidence of the reflective discussions associated with university learning. This adds weight to the critique of the school as a possible community of practice offered by Wubbels (2007) and others. The overwhelming affective influence of this relationship and the perception of variations in approach also offer another form of rule to consider. Furthermore, the diverse nature of schools and mentors means that, to some extent, the division of labour is more negotiated and variable than in university. Learning opportunities beyond personal teaching experience, such as observation of others, are somewhat context specific. Theory as a mediating artefact is notable by its absence in discussions about school. While both systems have the shared outcome of students passing the PGCE and becoming teachers, differing processes and objects are evident. It seems important, therefore, to focus on those activities that might integrate these objects

The focal point of Engeström's (2001) third generation of activity systems is the potential for 'expansive learning' to take place in the spaces between interacting systems. Within this model, so-called 'boundary objects' (Engeström *et al.,* 1995), intersecting with both systems, provide a forum for this learning. It is during the second semester, when students seem to be most receptive to appreciating links, when two experiences: the additional 'Enhanced Placement Opportunities' (EPOs) and the *viva voce* seem to serve as more genuine boundary objects. These are set up by university but rooted in school practice and foster shared dialogue and understanding across systems.

The *viva voce*, an assessment in the last few days of the course following the final school placement and sometimes involving staff from schools, is identified retrospectively as promoting links between school practice and theory (p.155). Requiring students to see the culmination of their training not as completing school experience, but instead as articulating and justifying their practice shortly thereafter seemingly helps to maintain a relatively high profile for theory in the second semester. The intention is that the questions are discussed with

the mentor in school, though no comments allude to this directly, perhaps giving weight to the aforementioned view that mentor-student conversations focus largely on procedural matters . Bearing in mind Shulman's (2004) contention that professional knowledge requires a theoretical underpinning, this seems particularly important. It should be noted, however, that, perhaps in keeping with the perception of theory as increasingly integrated and subconsciously influential, the *viva voce* is mentioned retrospectively rather than during the final placement itself. Furthermore, the comments suggest a use of theory largely motivated by the prospect of a high-stakes, formal assessment, rather than an intrinsic quest for understanding.

Perhaps more powerfully, the EPOs are universally cited as being useful and have evidently prompted in some participants a desire to find out more about the theory behind their vivid experiences. There is a strong sense of this serving to challenge their assumptions during the particularly fertile period between assessed placements when students seem to be most receptive to new ideas. Most encouraging is the fact that, in contrast to the use of theory for the *viva voce*, participants seem to have been intrinsically motivated to do this in the absence of any formal requirement or debriefing from the university (p.170-171), reinforcing Stevens' (2010) claims that the problematisation of learning situations is welcomed by students. This has much in common with the need to seek out the problematic and the complex, advocated by Loughran (2006) and suggests that incorporating opportunities such as this to 'unsettle' thinking (Segall, 2001) is particularly important if students are to spend more time in a single school setting. It seems that exploring opportunities for projects co-created from the outset by university and school, with genuine benefits for students in both settings, may be particularly fruitful. In doing so, we may be approaching McIntyre's (2005) vision of knowledge creating schools, aiming at generating a form of knowledge common to, and useful for, both researchers and practitioners. A further factor in any consideration of so-called third space working (Burch & Jackson, 2013), spanning university and school settings is that of the personnel who may be working across both settings.

The role of the University Link Tutor (ULT), in particular, seems to be under-developed. The dual role as lecturer and link tutor has huge potential benefits, as these staff members might act as boundary brokers (Wenger, 1998), with legitimate membership of both of these communities, or systems. Unlike Philpott's (2006) activity systems model, which does not recognise such joint membership, Figure 5.1 shows an awareness of university ITE staff as active in the communities of both systems. Fay comments (p.171), for example, that university tutors were connected to what went on in school and indeed all tutors involved in the students' exposure to theory at university also visited a proportion of the cohort in school. However, while this potentially allows for powerful dialogue linking forms of knowledge, the reality is somewhat different. In practice, a constraint is the fact that these tutors, like the school-based mentors, are simultaneously cast in the role of assessors. While the influence of university sessions is acknowledged to a certain extent, the only reference to ULTs occurs briefly in the focus group, in relation to teaching practice assessment (p.142). The implication seems to be that the tutor's role in the school setting is seen as a peripheral, assessment-oriented one and that a valuable opportunity to bring an outside perspective to the classroom through learning conversations based on theorising observed practice is being missed. Taken alongside the earlier arguments about developing mentors' involvement in wider aspects of student learning, this suggests a need to blur the boundaries between the roles of mentor and tutor. As Zeichner (2010) has noted, ensuring that theoretical learning in school assumes the same status as that at the HEI requires nothing short of a change in the epistemology of ITE. Perhaps counter-intuitively, current moves in England towards increasingly school-based learning for teachers may provide the opportunity for just such a change. In order to gauge the feasibility of such a shift, the capabilities of the students as learners need to be considered.

5.7 The emerging professional: readiness for learning

The theoretical framework for the study has positioned the interplay between theory and practice firmly within knowledge as a defining part of a profession. As such, a central question concerns students' readiness to go beyond a competence view of teaching and the extent to which they emerge from the course with the capacity to show the autonomy seen by Edwards *et al.* (2002) as characteristic of a professional. To recapitulate, previous longitudinal analyses of student teacher learning reveal some consistent themes: a progression from concerns about self to those about the learner (Fuller & Bown, 1975; Kagan, 1992; Capel, 2001; Conway & Clark, 2003; Burn *et al.*, 2003); a complex journey without discrete, sequential stages (Calderhead, 1997; Capel, 2001, Burn *et al.*, 2003); a stability of views over time (Kagan, 1992; Calderhead, 1997; Nettle, 1998) and even some suggestion of regression in learning and attitudes by the end of the process (Burn *et al.*, 2003; Tok, 2011). While these patterns of change hold true for participants in this study to a certain extent, some new insights are also evident. These point to a possible underestimation of today's postgraduate students and suggest that readiness to appreciate links between theory and practice varies according to the stage of the course.

A distinctive feature of the study is the capturing of genuine pre-course preconceptions. In Fuller & Bown's (1975) seminal study, pre-teaching concerns centre on prospective teachers' identification with pupils, closely mirroring Lortie's (1975) contemporaneous view of an apprenticeship of observation, during which teaching is seen from the vantage point of the pupil. The data in this study, however, strongly suggest that early beliefs are drawn from pre-course classroom experiences shortly before embarking on the course. The perspective of student-as-pupil (Crowe & Berry, 2007) is almost entirely absent, appearing, for example, in only one early interview and in none of the personal statements. Similarly, there is little evidence at this stage of the influence, identified by Smith & Schmidt (2012), of one's own favourite teachers. Preoccupations, such as the interest in behaviour management, in

many respects conform to those cited by Joram & Gabrielle (1998) and, although there is some awareness of discrete sources of knowledge, making links between these is seen in largely unproblematic terms, as evidenced by Tracey and Natasha's early comments (p.116). However, any view of these students as excessively naïve and little more sophisticated than pupils in their interpretations of the classroom would be far from accurate. The persuasive case made by Hobson *et al.* (2008) for acknowledging and exploring preconceptions remains, but the requirement, as part of selection, for prospective students to demonstrate and draw on prior experiences means that the depiction of the naïve debutant is no longer fitting. Indeed, of these case participants, four had family connections to teaching. A distinction may be drawn: these students are not, therefore, naïve about teaching *per se*, but perhaps about the process of learning to teach. As students embark on the course, therefore, an early priority may be to disrupt their thinking and begin to problematize the venture lying ahead. A journey of understanding is certainly evident as the complex interplay of theoretical and practical knowledge is revealed.

The first semester is a time of extremes and perhaps the greatest shift in understanding. Following a mass of theoretical knowledge in the initial weeks, a period of 'survival' on school placement ensues, during which time university influence and thoughts about theory seem to diminish considerably (p.169-170). In reality, some of the early university teaching concerns fairly procedural matters, such as familiarity with the National Curriculum, university assessment criteria and other requisite paperwork. This could almost be seen as the 'craft knowledge' (McIntyre, 2005) for being a student teacher and has some link to expectations of these students as professionals as well as learners. In the absence of any substantial practice to which this can be related at this stage, this is perhaps regarded as theoretical simply in the sense of theory in contrast to practice (Thomas, 2007). It may be that making a clearer distinction between the necessary 'administrative' details and genuine educational theory would be worthwhile. The remoteness of the university-led content whilst in school points towards the need, identified by Hagger & McIntyre (2006) for students to establish basic competence before they can

look beyond immediate concerns of survival and credibility. Perhaps what students need at this stage, therefore, are not in-depth ideas, but a tentative theoretical framework, raising key questions and issues to help make sense of what is to follow in school. The value of earlier practice experiences on which to draw is strongly suggested by comments such as Bethany's about ideas 'slotting into place' later (p.137).

As the course proceeds, the learning process becomes better understood: the retrospective use of theory to explain practice; the importance of 'safe' reflective space and, above all, the value of university-led experiences in fostering a new way of thinking all come to be recognised by the end of Semester One, as seen in the focus group data (p.136). Keeping up with the day-to-day demands of the classroom is certainly prominent in data relating to the second semester, but so is an interest in the practical minutiae of teaching and in age-appropriate pedagogy. In terms of theory and practice specifically, this can be seen in students' growing appreciation of adapted or situated principles as a legitimate form of theory. While Hagger & McIntyre's (2006) claim that teaching can only be understood in terms of the specific may be overstating the case, a move away from theory seen only as generalizable principles is clear. The period between assessed placements, when the EPOs occur, seems to be the time when students may be most ready for links to theory. Certainly, by second placement, participants are conscious of the components of the course making sense in a more coherent way and are able to view their school experience more thoughtfully (p.148). Kagan's (1992) model documents this form of development but also emphasises the relative stability of views over time and the lack of readiness of students for the demands of the practical placement. Both of these phenomena are attributed by Kagan to the lack of impact of ITE programmes. In this study, in contrast, although conceptions of theory and practice have changed in subtle, rather than dramatic, ways, final interviews with NQTs attest to the impact that the course has had and theory and practice specifically are seen as intertwined (p.166).

Also at the heart of teacher development models (Fuller & Bown, 1975; Berliner 1988) is the affective dimension of teaching and, indeed, for these students, emotions are a large part of their experience. Aside from the notorious workload of the PGCE, participants do not seem to anticipate issues of emotional wellbeing. The first school experience clearly has a huge impact, as relationships in school come to the fore and confidence fluctuates. Above all, there is evidence of Fuller & Bown's (1975, p.48) description of 'constant, unremitting self-confrontation'. Natasha sums up the need to compromise and settle for practice that is less than perfect (p.129). However, the process seems to be somewhat accelerated, as these concerns are far less prevalent in the second semester. Despite vivid depictions, as NQTs, of the ups and downs of their year, the latter stages of the course show a much higher level of confidence. This too may have implications for the timing of key experiences. For example, brief, early exposure to the demands and challenges of the teacher's role may lead to a more meaningful interpretation and contextualising of initial theoretical ideas offered in taught sessions. To return to Eaude's (2014) argument for personal and interpersonal knowledge not simply as a filter, but as a distinct facet of teacher expertise, opportunities to investigate models of resilience and self-efficacy may be particularly useful at this point.

In seeking to model this journey, it is noteworthy that there are contrasts in the data, corresponding to the public and more private faces presented by participants. The more considered, written accounts, ranging from pre-course personal statements, to essays and diary entries present a largely unproblematic view of teaching. This is very different from the impression conveyed in interviews. Participants are particularly candid about difficulties and anxieties in the focus group and the final interview, perhaps because they take place within the relatively secure environments of a peer group and their own classrooms as successfully qualified teachers respectively. This contrast between outward competence and inward uncertainty serves as a reminder of the need for ongoing research to probe beneath the surface of the student teacher's experience.

One might, therefore, characterise this journey as an accelerated form of Fuller & Bown's (1975) model: Fuller & Bown's first stage is little in evidence and the others are experienced in quick succession, with an early shift to a focus on pupil learning, for example. The implication would seem to be that, while 'survival' concerns need to be addressed at the outset, postgraduate ITE programmes can reasonably hold higher expectations of students' readiness, fairly early on, to encounter far more complex issues. This sense of early readiness is not prominent in the literature, even in more recent studies (Hobson *et al.*, 2008), which instead document barriers to learning arising from preconceptions. In summary, the most significant journey, I would argue, has not been one from naivety to understanding, nor from incompetence to competence. These students have come, above all, to an appreciation of the role of different forms of knowledge in their development and have developed the ability to think critically and to question assumptions.

Professional status was not mentioned explicitly by the end of the data collection. However, based on the criteria of critical engagement with knowledge (Alexander, 2010), an appreciation of theoretical understanding (Shulman, 2004) and the capacity to make a thoughtful contribution to the profession (Day & Sachs, 2004), participants could certainly be said to be thinking as professionals. As this journey seems to have been largely unanticipated, however, what is needed is a clearer vision for students from the outset of the learning opportunities ahead. The following chapter attempts to provide such a model.

Chapter 6: Conclusions and recommendations

6.1 Introduction

In this chapter, the strands of the study are drawn together and the contribution and implications considered. A number of key conclusions emerge from the study, some of which throw new light on the propositions from the literature which guided the data collection. Having considered the contribution made by this research, in a number of ways, a model for one year postgraduate ITE programmes is proposed and suggestions for further research discussed.

The learning journey emerging has been not simply about a developing awareness about teaching, but also a parallel, metacognitive one through which the process of learning to teach has been revealed to participants. Over time and linked to milestone experiences, the contribution of theory and the role of the HEI have come to be reconceived and understood differently. The original propositions first outlined in Table 2.2 (p. 54) are briefly compared to this study's key findings in Table 6.1 below.

Original Propositions	Summary of key insights from study
There is a lack of agreement about what constitutes teachers' professional knowledge	Students have a strong and sustained belief in the existence of a body of knowledge for teachers. Preoccupations change over time from an interest in universal ideas and delivery of teaching to more context-specific knowledge and pupil learning.
'Theory' in education is a broad and contested concept	Beliefs about the nature of theory evolve from a generalisable set of principles created by others for application by teachers towards a more nuanced view of theory as multi-faceted, open to interpretation and adapted to specific settings.
There can be a scepticism about the value of theory to teachers	A conception of theory as separate from practice is not particularly evident at the start of training. Attitudes towards theory are positive throughout the process and seem to become more favourable as time goes by. Theory is particularly powerful when used to make sense retrospectively of practice.
Students often believe most of their learning takes place in school	Although school experience is highly valued throughout training, the role of university becomes more prominent, coming to be seen as a place for reflection and consolidation of learning. Learning in school goes beyond practical teaching experience; observation of others is particularly powerful at all stages. Studying at Masters level is especially valuable, principally in fostering a new way of thinking about educational ideas.
Students may begin ITE with simplistic preconceptions of teaching	In contrast to characterisations of the naïve student teacher with views largely coloured by experiences of school as a pupil, these postgraduate students display a reasonably sophisticated, well-informed perspective from the outset of the process.
Though somewhat resistant to change, students' preconceptions about teacher knowledge *are* likely to develop over time	Whilst core beliefs are reasonably stable, understanding about sources of teacher knowledge does develop over time. Much of the existing literature would seem, therefore, to underestimate the starting points and capabilities of these learners.
Making links between theory and practice can be problematic on ITE courses The structure of ITE courses has an impact on conceptions of the relationship between theory and practice	Theory and practice links are not seen by students as particularly hard to make. Students are particularly receptive to theoretical ideas after experiencing initial practice and the interspersing of school and university time is important in this respect. Activities, rooted in practice, that challenge students' assumptions or require them to justify practice are especially useful in creating links to theory.
Emotions and relationships play an important role in learning to teach	Learning to teach is an unexpectedly emotional journey, with fluctuations of confidence. Relationships with mentors in school are highly influential but their roles have little to do with making links to theory.

Table 6.1: Original propositions and key findings

6.2 Potential contribution made by this study

6.2.1 Contribution to ITE community

A contribution to knowledge, debate and practice within ITE was envisaged and achieved in a number of ways. Mindful of Pring's (2004) criticism of education for its lack of a cumulative body of research, I sought to build upon previous studies. A point of comparison has been provided with seminal models of student teacher development such as Fuller & Bown (1975) and a more specific focus on theory and practice used to complement more recent wide ranging studies such as Hobson *et al.* (2008). More specifically, Hobson *et al.* highlight preconceptions as a particular issue meriting further research and this was taken as one starting point for this study. As a result, a more nuanced view of postgraduate students' thinking has been gained. Students' relative lack of initial naivety, the accelerated development of understanding, the enduringly positive view held of theory and the potential power of particular partnership activities are examples of new perspectives offered which add to the existing literature.

The research design itself offers a distinctive contribution due to its longitudinal nature. Other studies seeking to chart developments in students' thinking over time, such as Hagger *et al.* (2008) and Stevens *et al.* (2006) have tended, probably for reasons of access and convenience, to be restricted to the temporal boundaries of the ITE programme. This study offers a rare insight into the largely unseen moment before the PGCE, when preconceptions are largely untainted by socialisation into training. Moreover, the data collection concludes in the first term of teaching, allowing participants to consider their journey and the contribution of theory and practice from the perspective of a qualified teacher. Their account of changes in understanding from the point of view of a practitioner, rather than completing student, is a novel one, not only allowing for triangulation over time, but also suggesting possible avenues for HEIs' continuing involvement with past students during this phase. It highlights, for example, the perhaps unanticipated way in which theory and

critical thought, far from being rejected in the challenging early weeks in school, are perceived as more important than ever. In line with the characteristic depth of a case study (Bassey, 1999), this research also presents the authentic voices of students undertaking a one year postgraduate route into teaching. At a time when students in England, usually paying high fees, have choices between a plethora of school-led, as well as HEI-led, ITE routes, it could be argued that the voice of the 'consumer' is especially significant. One reviewer of the journal article reporting on Phase One of the findings (Knight, 2013) remarked, for example, that the insight into students' preconceptions was particularly timely.

Finally, at this time of change, new relationships between schools and universities are being forged and programmes of study redesigned. Decisions about the content, form and sequencing of the materials and experiences presented to student teachers are being made. This study provides a clear picture of trainees' receptiveness to aspects of theoretical and practical knowledge at different stages of their development. Clear implications have arisen for the structure of programmes and, most importantly, for the types of activity that may promote coherence and meaningful links.

6.2.2 Personal contribution

Undertaking the study has also contributed significantly to my personal development as a researcher. In this respect, the process has been equally as important as the finished product. Although I had previously carried out small-scale research into my practice, both as a teacher and lecturer, this study is on a larger scale and over a longer period of time. As a result, I have had the opportunity to work on a longitudinal study for the first time and to use methods that were new to me, such as a focus group. I now have a vision for developing aspects of my research practice further, for example by experimenting with data analysis software. It has also become much clearer to me that research is a dynamic process. Although the study was carefully

conceived from the outset and proceeded largely according to plan, some elements were unforeseen: opportunities like the convening of a respondent validation group which could also generate new insights were seized while the research was in progress. Above all, I feel a much more legitimate member of the research community and, as argued by Rowley & Slack (2000), eventual dissemination is really a means to this end. Discussion of my research formally at conferences and through publications and informally with colleagues at my HEI and elsewhere has given me powerful insights into new possibilities or future career interests.

The study has also made a substantive contribution to my central teaching role on programmes such as the PGCE. My awareness of ways to make meaningful links between sources of knowledge has developed considerably and the structures of taught sessions and tasks have already been shaped by the experience. Much as we might hope to challenge the views of students by problematising their practice (Loughran, 2006; Stevens, 2010), I have had to question my own assumptions and look afresh at my day-to-day practice. The strong affective dimension in learning to teach and the way that developing knowledge for teaching is inextricably bound up with confidence and emotions was, for example, something I had perhaps forgotten since my own time as a student.

Finally, a contribution has been made to my role as a colleague to others. At the most immediate level, I have been able to disseminate ongoing and emerging findings to colleagues and thereby help to influence practice and programme design. For example, a new session at the very start of the PGCE focused on questioning and exploring the nature of teaching as a profession has been introduced. This interest in an impact on practice, as well as the theoretical body of knowledge within a field is, of course, characteristic of the EdD (Bourner *et al.*, 2001; Lester, 2004). Furthermore, the inter-professional nature of the EdD also means that links have been fostered with colleagues from other, related disciplines such as social work and training. Most strikingly, to return to Lave & Wenger's (1991) depiction of a communities of practice as being centred on shared domains of interest, relationships and repertoires of

practice, it is very clear to me that my own community of practice is now far broader than I had supposed. As outlined in the section below, I now feel that I am working with colleagues in ITE generically as opposed to those at a single institution.

6.3 Recommendations for ITE programmes

Drawing on the evidence presented, it is now possible to propose a model for the ITE year that may maximise the links between theory and practice. Although, looking back as NQTs, the participants were extremely positive about the existing structure, ITE in England is in a period of flux. Grossman *et al.* (1999) have discussed creating a body of so-called 'high leverage practices' (p.277) for student teachers. I would argue that attempting to define a set of equivalent practices for teacher educators may help to meet the new challenges presented by increasingly school-based and school-led forms of training. The practices for each stage of the process are summarised in Table 6.2.

Commencing ITE	Semester 1	Semester 2	Newly-qualified
Providing early exposure to realities of classroom practice Positioning the university as a forum for thinking about teaching Problematising teacher knowledge: building on preconceptions and challenging assumptions Holding high expectations of starting points	Frequently interspersing teaching experience and other learning Expecting students to begin to justify practice Helping students to begin to construct their own framework for practice Providing input relevant to early concerns: pupil engagement and staff relationships	Providing more sustained time in the classroom but not all teaching Seeking out and using 'boundary objects' for shared understanding across settings Facilitating frequent professional dialogue in school to articulate practice: link tutor involvement Providing input relevant to later concerns: pupil learning and individual differences	Offering continued contact with university, focused on: - professional responsibilities - collaborative learning away from the classroom - teachers as researchers

Table 6.2: ITE practices during training to promote the integration of theory and practice

6.3.1 Commencing ITE

It is striking that, while prospective students have been seen to be far from naïve, one aspect of learning to teach that seems to be largely unanticipated beforehand is the affective dimension of the process. Pre-empting the 'shock' of the first placement period with an early taste of the realities of the teacher's role may be worthwhile. As well as drawing on some early school experience, the admissions and induction phases could be used to bring to the foreground the concept of resilience and any prior experiences that may have equipped students in this respect.

Bearing in mind the stark contrast between the early limited conception of university largely as a provider of background information for practice and its eventual recognition as much more than this, it would be useful to clarify the

university's role more explicitly from the outset. As English ITE moves increasingly into schools, a clear positioning of the university contribution, emphasising the value added to the process, is more important than ever. From the evidence in this study, key points to stress would be the provision of a 'safe' forum for relatively objective consideration and discussion of practice; the access to large numbers of peers experiencing diverse, contrasting settings; the promotion of a critical, evaluative response to new ideas and a place to make sense of practice and broaden horizons through timely links to relevant theoretical perspectives.

Following this, the highly charged early weeks of the course seem to be a potentially fruitful time to problematise teaching and to explore early preconceptions and assumptions. Indications, for example, that new students may be aligned to a competence view of teaching would be interesting to examine. Given the apparent belief at this stage in teaching as a profession with a body of knowledge, it may be particularly valuable to begin to construct a shared view, to be revisited throughout the course, of what might constitute such a knowledge base. In a similar vein, conversations, such as those with participants as part of this study, about what is understood by theory and how this differs from practice may expose interesting tensions. In all of this, an element of reflexivity on the part of the tutor is important so that assumptions, such as a simple theory and practice dichotomy are questioned and not simply perpetuated. Above all, despite the magnitude of the journey lying ahead of these novices, their readiness to learn and receptiveness to new ideas should not be underestimated. High expectations of quickly beginning to think as teachers are entirely appropriate.

6.3.2 The first semester

Classroom experience is pre-eminent in students' minds. However, they also see great value in stepping back from this in order to reflect and they acknowledge that they have had to fit in with the practices of their mentors to a great extent. In order, therefore, to mitigate any tendency for narrow

socialisation into school practices and to make the most of the opportunities for linking to wider forms of knowledge, school placements at this stage might be punctuated more frequently with time at university. As well as the chance to deconstruct practice in a more immediate way and to avoid the initial overload of rather abstract, decontextualised theory, university support would be strengthened at what is potentially an overwhelming time of high emotional demands within the workplace. The slight feeling of disconnection between university and school experienced by these students at this stage might thereby be lessened.

Capitalising on the students' largely positive views of reflection, links could perhaps be further enhanced at this time through tasks focusing on justifying practice. Students could be encouraged, for example, to provide a strong rationale for their teaching and this may help to move mentor discussions on from the merely procedural conversations to a clearer articulation of practice. In this way, there may be less sense of directed or 'school-based' tasks being a distraction and seen as exclusively part of the university's world. Thereafter, early conceptions of the nature of knowledge for teaching could be revisited, as students begin to become better informed consumers of educational theory. This study has shown how the understanding of theory shifts to include more situated, context-specific views, so students might now be supported to begin formulating a personal framework for practice in their current placement setting, akin to craft knowledge, drawing on relevant theory as well as expertise pertinent to and derived from that particular school.

In considering the aspects of published theory upon which to focus, students' understandable preoccupations at this time could be acknowledged to a greater extent and partially resolved. Features of teachers' outward, visible performance such as engaging pupils, managing behaviour and collaborating with colleagues as part of a team are likely to be seen by students as most relevant. Allowing a degree of ownership of specific aspects of study would seem to be particularly powerful, again helping to create a credible rationale for their current practice.

6.3.3 The second semester

As students move into their final period of school placement, they will assume greater responsibility for the class and take on a higher percentage of the teaching load in readiness for entry into the profession. However, this research has highlighted the continuing value of observation of practice of a wide range of teachers at this relatively late stage. Rather than seeing this as something associated with early weeks in school to be superseded by practical teaching experience, this form of learning needs to be sustained. As participants suggest, observation comes to take on a different form, as the nuances of practice are noted and appreciated and time needs to be set aside for this activity.

Following the first major period of teaching, students seem particularly receptive to new ideas, as this is the time at which learning begins to link in a coherent way. Looking at this stage for 'boundary objects' to bridge the worlds of school and university and to provide an authentic forum for new learning through integrating sources of knowledge would be very powerful. In this study, students cite their EPOs as one such experience. A brief experience in a school context unlike those experienced beforehand serves to challenge assumptions, promote new thinking and, in some cases, motivate students to look more deeply at the theoretical underpinnings. Ideally, such objects or activities would have a sense of value in both university and school settings and an additional development might be small-scale action research involving not only students but collaboration between staff from both settings.

As students, in their final school weeks, increasingly adopt the persona of the teacher, a new form of professional dialogue with mentors may be possible. Building on the first semester, articulating and justifying practice remain important and this could be linked to students having greater ownership of the reflective process at this stage. In the case of these participants, the fairly formal device of the *viva voce* at the end of the course has been a factor in keeping a theoretical underpinning prominent. Retaining this as a requirement seems valuable, particularly if it involves school staff. Since the university link

tutor featured little in participants' thinking, this suggests that this role too may be reconceived and enhanced to encompass more learning conversations and a greater presence in school, alongside the existing assessment and moderation. Once again, this might be seen as something to distinguish the university's role somewhat from the existing expertise in lesson observation and mentoring that exists in school.

Theoretical input at this stage can mirror students' developing awareness and shifting concerns by focusing to a greater extent on pupil learning and individual differences. The idea of students as theorists themselves might be further explored at this stage. Having earlier drawn on others' views to create a framework or practice, they may now be able, with support, to offer new evidence-based insight into phenomena experienced.

6.3.4 The newly qualified teacher

Currently, formal university involvement ceases with the recommendation for QTS. There seem to be strong grounds for suggesting that this represents a lost opportunity. As practising teachers, free from the university's influence, all the participants in this study are more positive than ever about the HEI contribution. Support from outside the school may help new teachers to deal with the sudden weight of responsibility. More importantly, this may be a way of maintaining the space for reflection, consolidation and sense-making so valued by students on the course and continuing the 'learning conversation' begun in training. Finally, to continue the thread of justifying and theorising practice that has been emphasised in previous sections, these new teachers are ideally placed to form a bridge between universities and schools by becoming, on a limited and manageable scale, teacher-researchers. Researching one's own practice was, for the most part, beyond the scope of the PGCE for these participants but would represent a logical next step and the beginning of a journey of professional development.

6.4 Suggestions for further research

Returning to the epistemological assumptions underpinning the study, the findings and conclusions presented here are not in the form of unassailable truths but rather personal constructions (by both the participants and myself) of experiences within a specific case that have aimed to generate what Lincoln & Guba (1985) might term working hypotheses. As such, there are many possibilities for further research which would help to contribute to our understanding and refine these hypotheses. The following are some specific suggestions:

1. This study was undertaken with a case group drawn from a university-based PGCE course. It would be illuminating to replicate the research design with a sample of school-based trainees in order to reflect on the differences in experiences of theoretical and practical learning.

2. The notion of activities serving as boundary objects, potentially promoting coherent learning experiences with authenticity for both school and HEI contexts has been shown to be of interest, as has the blurring of traditional roles of university tutor and mentor. Action research projects to explore the impact of any such interventions would be valuable.

3. This longitudinal study has demonstrated the value of understanding student teachers' development over time and of their receptiveness to challenging ideas as newly-qualified teachers. As partnership roles are redefined, investigating the possibilities for HEI involvement in early CPD for practising professionals would be of interest.

4. The potential for an enhanced role for the school-based mentor has been discussed. Further research is recommended into mentoring conversations aiming to deconstruct observed practice by establishing links to wider forms of knowledge.

5. Participants have an apparent enduring belief in a body of professional knowledge, in contrast to the literature suggesting that this is difficult to define. It would be interesting to work with students over time to document their views on what they see as constituting this knowledge base.

Chapter 7: Dissemination of the research

7.1 Introduction

In this chapter, the dissemination rationale, strategy and activities are outlined. Although personal understanding is a laudable aim, the value of research lies also in its effective dissemination (Wellington, 2003). As Rowley & Slack (2000) suggest, this is as much about participation in a wider community as publication as an end in itself. This notion of community is a valuable starting point for a consideration of dissemination, serving as a reminder that research should represent a contribution to a body of knowledge. Indeed, Silverman (2010) regards the need to contribute to ongoing conversations in the field as being an often overlooked part of the research process

Bourner *et al.* (2001), in their analysis of the distinctive features of a professional doctorate, stress the goal of a contribution to practice, rather than theory. This view is reinforced by Lester (2004), who identifies a characteristic interest in development and systemic change. In light of this, it is expected that this study could potentially make a contribution to four tiers of practice:

- personal practice
- practice of colleagues within the university
- practice of colleagues at other ITE providers
- wider debates on educational policy and direction.

These tiers closely correspond to Silverman's (2010) three categories of audience for educational research: academic colleagues, policy makers and practitioners. The means to achieving this and the attendant issues need to be explored in some depth.

7.2 The nature and challenges of dissemination

Dissemination as a concept is multi-faceted and subject to various interpretations. Harmsworth & Turpin (2000) refer to:

> *The delivering and receiving of a message, the engagement of an individual in a process and the transfer of a process or product.* (p.3)

Delivery and transfer, however, suggest a linear, unidirectional process offering little scope for dialogue and Hughes (2003) makes a distinction between a positivist view of new knowledge being simply taken up and a more interactive, responsive, interpretivist stance. Approaching this study, I conceived of dissemination as an ongoing process, beginning before the start of data collection, rather than as the imposition of a finished product. While Huberman (2002) characterises the conventional roles of researcher and practitioner as those of 'diffuser' and 'user', Hughes (2003) rejects the term 'diffusion' as suggestive of haphazard actions and positions dissemination, in contrast, as a systematic activity. This is supported by King (2003) who contrasts the metaphors of scattering and sowing with the more focused idea of propagation, implying an element of nurture. Although outcomes of the study may spread 'organically' and in unpredictable ways, the need for a focused, strategic approach is clear.

This issue links clearly to the question of the purposes of dissemination. Granger & White (2001) suggest the goal of dissemination is utilisation and that, consequently, the new knowledge must be used by the recipient. Their arguments, however, are primarily aimed at those working on funded research where there may be a somewhat different sense of accountability. A broader and more useful model for this study is proposed by King (2003), who discusses dissemination for awareness, understanding and action: a much fuller interpretation.

The intended impact of the study, therefore, was progressive, moving from raising awareness in the early stages, through understanding, towards action, which can be seen as equivalent to Granger & White's 'utilisation'. Consequently, I needed to consider whether parts of the incomplete study could be disseminated at an early stage. Wellington (2003) advocates early publication of interim findings, so that an author's interest can be indicated and links forged with others in the field. Certainly, this is in keeping with the responsive approach mentioned by Hughes (2003) in which incomplete findings can assume a high status. Huberman (2002, p.263), calling for 'sustained interactivity', adds that ideas from research take time to effect change on practice and that findings are more easily assimilated if they build on previously shared information. Early dissemination of provisional ideas, however, needed to be handled carefully. Data are increasingly shared online and what was intended for consumption by targeted colleagues, with a shared understanding of purpose and process, could become available more widely and misinterpreted.

7.3 The dissemination strategy

King's (2003) tripartite model of awareness, understanding and action provides a useful starting point but implies that projects will pass through each of these stages in turn. While this is true to a certain extent, the three purposes of dissemination overlapped within this study, so the process was not as rigidly sequential as suggested. Furthermore, the categories themselves are not mutually exclusive: understanding is arguably a pre-requisite for informed action. The range of different audiences, from immediate colleagues and students to the broader educational community means that this is a multi-faceted task. Nevertheless, in seeking a 'best fit' channel, the core of the strategy was ongoing, two-way dialogue through conferences and publication, culminating in an article for at least one carefully selected journal.

A distinction may be drawn between the strategy and the implementation of this in the form of a plan. A chronological plan of dissemination activities is provided in Appendix 7.1, while the subsequent discussion of examples takes a thematic approach. The three categories, however, have been conflated into two: dissemination for initial awareness and formative feedback and dissemination for understanding with potential for action. In the case of this study, the aim from the outset was for impact upon practice and so understanding and action were seen as inseparable. In line with King's (2003) views, different levels of target audience have been delineated.

7.4 Dissemination activities

7.4.1 Dissemination for initial awareness and formative feedback

In line with the views that dissemination can be viewed as a, two-way process (Huberman, 2002; Hughes, 2003), awareness of the project at the earliest possible stage was important, partly to establish contacts with interested parties but, perhaps even more crucially, to help shape the research itself. At the time when the research was first being considered, for example, an article was published in a practitioner publication (Knight, 2010) partly as a means of rehearsing some of the underlying arguments. At the level of immediate colleagues, ongoing conversations, both informally and with a 'critical friend' helped to shape the study and to maximise its potential benefits and originality. Colleagues' co-operation and awareness are also vital if the project is to be approached in an ethical manner, minimising any disruption to the programme and avoiding deception. Opportunities were identified, through existing meeting structures, to feed back progress at various points.

In order for the eventual dissemination of findings to have broad relevance, early dialogue with others in the ITE community was valuable. Informal contact with researchers who have published in this field and are cited in this study (for example Andy Hobson, Alison Jackson and Elaine Hodson), was made and

valuable words of encouragement and insight received. Raising awareness of the research was also undertaken more formally. For example, a poster was presented at the 2011 BERA conference (see Appendix 7.2). This generated useful interest and discussion and won an award for the best early career researcher poster of the conference. The study was also publicised through a 'research notice board' article in a peer reviewed journal (Knight, 2012). Although, somewhat disappointingly, this led to no direct feedback from readers, potentially useful initial contact had been made with the editor and audience of a journal targeted for future publications.

7.4.2 Dissemination for understanding with potential for action

King (2003) distinguishes between active dissemination, through which resources are taken to an audience and passive dissemination whereby they are made accessible for those who may need them. As the case has been made for this research being particularly topical in light of changes to ITE in England, the intention was to combine offering an externally validated addition to the literature, through eventual publication in a peer-reviewed journal with active and relatively immediate dissemination in person to colleagues. An early opportunity was an invitation, arising from the BERA poster, to present emerging findings during data collection to colleagues at the University of Leicester at an informal seminar. Feedback was very positive, showing direct relevance to the practice of the audience and some useful questions prompted thought on how best to explain particular aspects of the methodology. Shortly afterwards, a paper was presented at the 2012 Teacher Education Advancement Network (TEAN) annual conference. This was selected due to its emphasis on supportive dialogue and its strong orientation to practice within the ITE community. Once again, the response was encouraging and provided an opportunity to rehearse the communication of complex ideas. Following the completion of data collection and analysis, these early appearances were complemented by a paper at the 2013 BERA annual conference, a prestigious forum with a strong research orientation (see Appendix 7.3 for programme extract and feedback). These conference papers allowed for relatively

immediate dissemination, in contrast to the longer process of a journal publication.

Mindful of the perceived importance of building on, and adding to, previous knowledge, the specific journals targeted for dissemination are significant. The first phase of the research, on pre-course preconceptions, was reported in the peer-reviewed TEAN journal (Knight, 2013), a journal strongly linked to ITE practitioners (see Appendix 7.4 for abstract). This process was invaluable, both as an insight into the publication process and as a source of feedback from reviewers on the presentation and communication of findings. The Journal of Education for Teaching and Teaching and Teacher Education have published much of the international research in this specific field and therefore provide the appropriate context for this study to have the maximum impact in the wider field of education research. As well as the substantive findings, however, there may be scope for a separate article on the methods used (Wellington, 2003; Silverman, 2010). Dahlberg (2006) warns that quality may suffer if this is simply a strategy for squeezing extra publications from a single piece of research. In this case, however, the potential complexity of such a longitudinal case study may well be of genuine interest to others in the field.

The level of audience at closest proximity was that of colleagues at the university. The main period of data collection and analysis coincided with a time of great change, as programmes were reconfigured to meet the challenges of increased school-based training. As well as informal contributions as a team member to ongoing discussions, including progress updates (see Appendix 7.5 for example of handout), it was possible to meet more strategically with colleagues such as the PGCE programme leader so that findings could be fed immediately into the programme design process. As a result, the structures of the two forms of PGCE programme in place for September 2013 were informed in part by this study and the research was cited in meetings with external partners, such as school leaders. This process seemed to exemplify two of King's (2003) observations about effective dissemination. Firstly, this immediate impact was predicated on a degree of credibility and trust born of existing working relationships and secondly, the

implementation of these ideas was carried out by others and was based on their personal interpretations of the findings presented. It was important, therefore, to accept King's view that the 'resource' being shared would necessarily be adapted by the user in the process.

Returning to the discussion of the nature and aims of a professional doctorate, Lester (2004) argues that, if academic journals are the province of PhD research, then the professional doctorate should aim for impact in a community of practice wider than the original setting. Ultimately, therefore, there should at least be an ambition for the outcomes of this study to go beyond considerations of programme design in ITE. The original interest in this field arose from a debate about the nature of teaching as a profession and teacher autonomy that, as mentioned at the outset, is now more relevant than ever. It seems important, therefore, that the findings connect with the world of education beyond the university. For a wider readership, including educational policy makers, the submission of an article on the professional knowledge of teachers to a publication such as the Times Educational Supplement is planned.

7.4.3 Dissemination to Participants

A final, but important, audience for the research is the case group itself. The point has previously been made that modelling research-informed practice has potential benefits for beginning teachers. Webb (2010) argues for the power of an informative debrief as a learning experience, suggesting that this could form an integral part of a programme of study. Due to the longitudinal nature of the study, the case group had left the course by the time that most findings emerged, though the informal focus group on their final day, set up as a form of respondent validation, did allow consideration of some emerging ideas. As suggested by this study and others' research (Haggerty & Postlethwaite, 2012), extending the university learning experience beyond the formal end of ITE is positive and worthwhile. A further purpose for such dissemination is highlighted by Simons (2009) who questions the ownership of case study data

and advocates giving participants some influence over how they are portrayed. With this in mind, the TEAN journal article was sent to all participants. As this was a rehearsal of how the full findings might eventually be presented, this was also an opportunity for participants to voice any concerns. All feedback received was positive, expressing an interest in seeing these early outcomes and suggesting an accurate portrayal of the journey of these emerging professionals.

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Appendices

Appendix 3.1 Profile of 2011-12 PGCE cohort

Age				Gender		Where studied?		BME			
21-24	25-30	31-35	36+	M	F	same university	other	Teaching Assistant	Other career change	Straight from degree or short term work only	
46%	27%	10%	17%	20	80%	29%	71%	16%	28%	56%	5%

(approximately 25% on PGCE 3-7 route; 75% on PGCE 5-11 route) n=98

Appendix 3.2: Summary of pilot findings

The Emerging Professional: an investigation into teacher education students' developing conceptions of the relationship between theory and classroom practice before, during and after a PGCE programme

Initial findings from pilot phase of research March-June 2011

Pilot data collection

Five PGCE students were involved in piloting. All five took part in a focus group, four submitted reflective diaries and two were interviewed individually. One of the participants was tracked through the whole process (3 different types of interview, focus group, reflective diary). Almost all of the wider PGCE cohort (78 students) completed a brief questionnaire in order to ascertain how typical the views of the case group were. Additionally, a future GTP student was interviewed to pilot the capture of pre-course preconceptions, which will form the basis of the main study.

As this is to be a longitudinal case study, with full data collection spanning a 14 -15 month period, this brief four month piloting phase clearly does not reflect changes over time to any great extent, but instead mainly offers a glimpse of PGCE students before, during and after PT2.

Tentative Finding / Claim	Exemplified by	Evidence base							
		GTP AInterview 1	PGCEA Interview 1	PGCEA Interview 2	PGCEA Interview 3	Focus group	PGCEB Interview 3	Reflective Diaries	Cohort questionnaire

1. Before beginning a GTP, **a narrow view of learning to teach is evident**. The preconception is that the learning will need to involve planning, other paperwork and behaviour management strategies. The maximum time in school is seen as important and the university's role is uncertain. *(this is a weak claim, based on only one student and may reflect GTP concerns more than PGCE)*	*I hope [the university] are going to give me some back up in the things I'm going to learn…how to do the paperwork, how to do good lesson plans, how to deliver a good lesson, how to keep children engaged, tools that you need to be in a classroom environment.' (GTP A)*	☐							
2. Before PT2, PGCE students are still **preoccupied with 'survival' concerns** relating to making sense of a mass of material, coping with workload, managing behaviour. Emotions and anxiety are evident at times. By the end of the programme, these concerns are much less prominent	*Suddenly you are faced with a mountain of stuff you've got to cope with (PGCE A)* *You have days when you just think oh no, everything's too much (PGCE A)* *Sometimes you're thinking , God is it going to be like this forever?(PGCE C)* *By now we've all learned to prioritise a bit more. Mentally I can cope with it a bit better (PGCE C)*		☐		☐	☐			
3. Following PT1 and the EPO, there is **a growing appreciation of the complexity of teaching** and how daunting this is. During and following PT2 there is more confident articulation of professional judgement, reflecting and making sense of this complexity	*So it's not just yourself and the subject knowledge: the whole thing: the subject knowledge per se, the approach, the pedagogic approach…(PGCE A)* *It's all the things you don't see from observing a lesson that I didn't think really existed (PGCE D)* *I realised, my God, you're five and I'm asking you to write quite a long sentence here and I seem to forget how hard we're working them. (PGCE A)*		☐	☐		☐			

4. There is **uncertainty, but not negativity, about the role of theory in their learning journey**. Theory is discussed in awkward, sometimes humorous ways. It is seen as something to relate practice back to but not as a conscious influence on practice. Retrospectively, at the end of the course, **the perceived importance of theory can be seen to have fluctuated over time**. For one student it has just a strategic role for academic assignments, but for another it has become more firmly intertwined with practice. Theory is often referred to in a narrow way (e.g. 'learning theory') but by the end one student mentions themselves as a potential theorist	*You don't actively say, oh that was very Piagetian, but I think you do internalise some of it and you do take it on board (PGCE C)* *There's part of me that thinks, well do we really need to know all this stuff? But then again you can't dismiss it all (PGCE A)* *That's why we've had to learn the theories: so we've got a reason for what we're doing or at least something to explain what we've done. (PGCE E)* *I think you also come up with your own theories about why some things work and why some things don't work and some of them might well agree with kind of an academic theory that you didn't realise existed (PGCE A)* *[theories] become more real when you've got more time to reflect on them with your practice. With that, the importance grows, for me (PGCE B)* *97% of cohort agree or strongly agree with 'Becoming a teacher involves understanding not only what teachers do but why they do it'* *99% of cohort agree or strongly agree with 'Teachers should have knowledge about principles of learning and teaching that go beyond any particular school and can be applied in a range of contexts'*				☐				☐

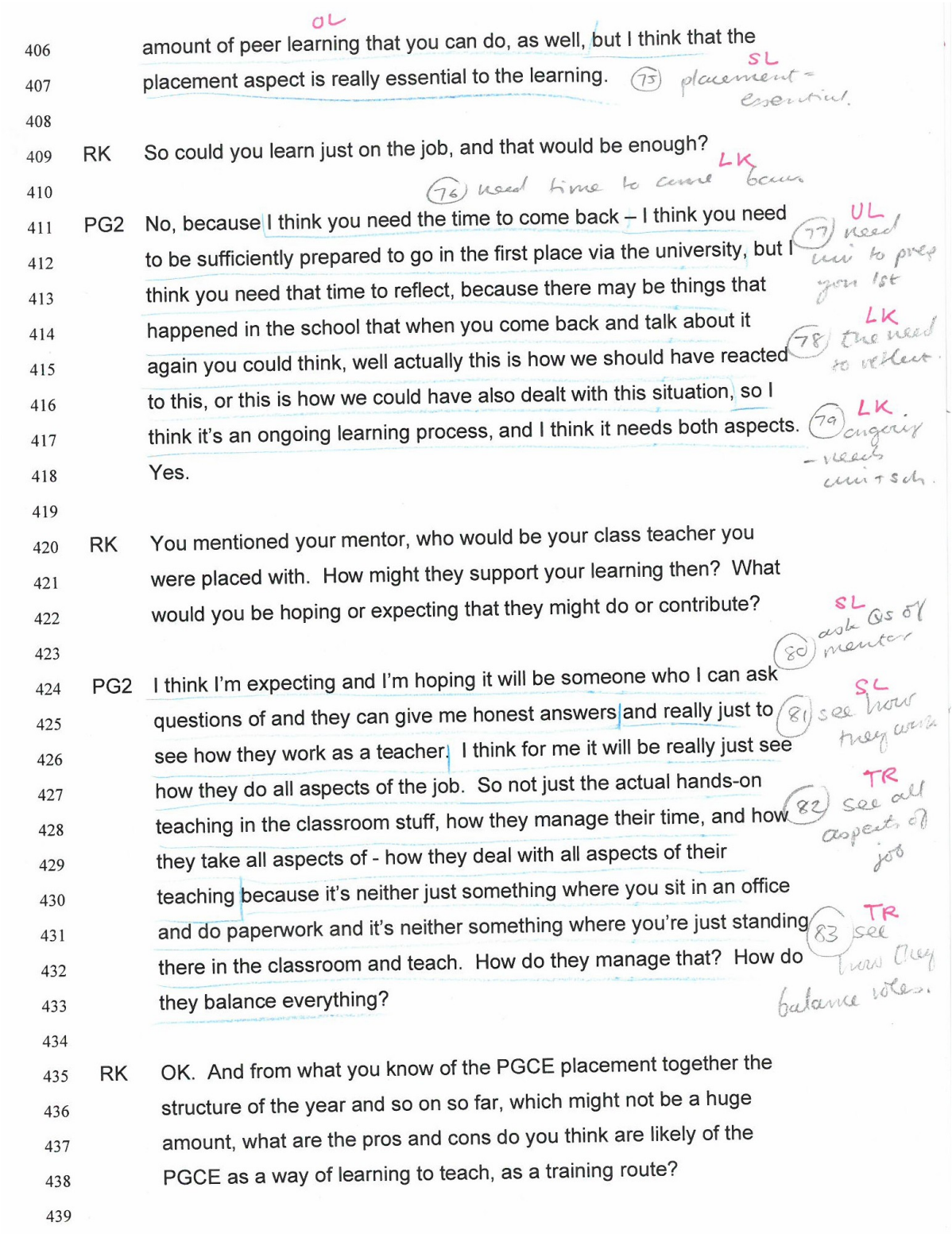
5. There is a strong belief that **teachers do have a specific body of professional knowledge**, but it is difficult to be precise about what this might be.	*As a profession it has its own skills base and its own demands on you (PGCE A)* *I can't think there's many other professions except possibly doctors and things will have the same level of assessment and accountability (PGCE A)* *98% of cohort agree or strongly agree with 'Teaching as a profession has a specialist body of knowledge that ball teachers need to be aware of'*		☐		☐				☐
6. There is **difficulty in connecting university and school components** of the course and these are sometimes seen as mentally separate	*I would say there's a big demarcation between university and school (PGCE B))* *As soon as [the placement] was finished, it's right I've got to switch back into university mode now (PGCE C)* *I think it's hard to find that dual kind of sense of being a teacher and trying to think academically at the same time (PGCE C)* *Once I was at school, it was like uni didn't stop existing but it only existed as kind of the ULT visit (PGCE A)* *It's almost like there is a divide though, in our heads (PGCE A)*					☐			

7. **University is valued as a reflective space** that allows time and opportunities for making sense of practice	*[when back at university briefly] I found it quite useful because you do get to kind of like reflect and assimilate and everything else (PGCE C)* *You're in school for certain periods and then you come back out and you kind of get that kind of: right, a bit of teaching and a bit of stopping and reflecting on it and thinking about it and learning more about it, and then going in again and trying it again in a different context and then coming back again (PGCE A)* *You can go away and read things and think, that's how I'm going to implement things in my own practice (PGCE B)*								

8. **School is consistently rated as the main setting for learning to teach.** This is the initial preconception and is maintained throughout. The focus, however, shifts from learning from the mentor to learning from personal experience	*I think NQTs who have done PGCE or B.Ed need more time in schools, they need more teaching time. more teaching practice, more hands-on experience (GTP A)* *The balance is still on the school bit of it for being most useful (PGCE A)* *I would have to say I think I've learned more in school just doing the job than I have coming to sessions at uni, which isn't to say the sessions at uni aren't worthwhile (PGCE A)* *I did have some stinkers. In some respect I learned more from those than the other ones (PGCE C)* *Most of the knowledge [for this lesson] was based on prior school experiences and discussions with staff and mentor (PGCE E)* *68% of cohort agree or strongly agree with 'The knowledge that teachers require is learned mainly in school'* *99% of cohort agree or strongly agree with 'Learning to teach is mainly a matter of practice and personal experience'*	☐	☐		☐	☐		☐	☐

Appendix 3.3: Critical partner coding of transcript

Initial coding of a transcript excerpt:



amount of peer learning that you can do, as well, but I think that the placement aspect is really essential to the learning.

RK So could you learn just on the job, and that would be enough?

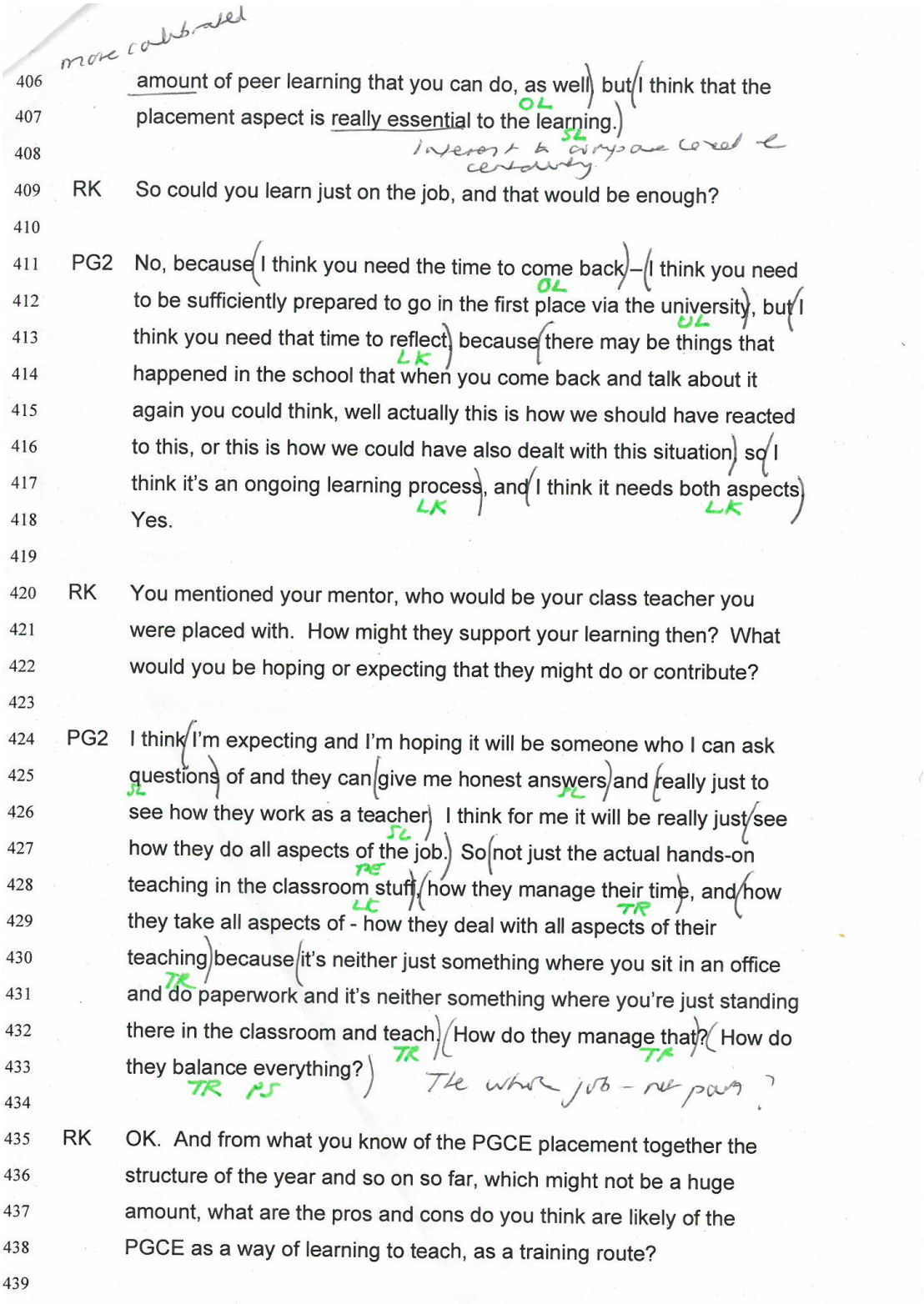
PG2 No, because I think you need the time to come back – I think you need to be sufficiently prepared to go in the first place via the university, but I think you need that time to reflect, because there may be things that happened in the school that when you come back and talk about it again you could think, well actually this is how we should have reacted to this, or this is how we could have also dealt with this situation, so I think it's an ongoing learning process, and I think it needs both aspects. Yes.

RK You mentioned your mentor, who would be your class teacher you were placed with. How might they support your learning then? What would you be hoping or expecting that they might do or contribute?

PG2 I think I'm expecting and I'm hoping it will be someone who I can ask questions of and they can give me honest answers and really just to see how they work as a teacher. I think for me it will be really just see how they do all aspects of the job. So not just the actual hands-on teaching in the classroom stuff, how they manage their time, and how they take all aspects of - how they deal with all aspects of their teaching because it's neither just something where you sit in an office and do paperwork and it's neither something where you're just standing there in the classroom and teach. How do they manage that? How do they balance everything?

RK OK. And from what you know of the PGCE placement together the structure of the year and so on so far, which might not be a huge amount, what are the pros and cons do you think are likely of the PGCE as a way of learning to teach, as a training route?

Critical partner's coding of same excerpt:



more collaborated

amount of peer learning that you can do, as well but I think that the placement aspect is really essential to the learning. OL SL

Interest to carry on covered – certainly

RK So could you learn just on the job, and that would be enough?

PG2 No, because I think you need the time to come back – I think you need to be sufficiently prepared to go in the first place via the university, but I think you need that time to reflect because there may be things that happened in the school that when you come back and talk about it again you could think, well actually this is how we should have reacted to this, or this is how we could have also dealt with this situation so I think it's an ongoing learning process, and I think it needs both aspects Yes.

OL UL LK LK LK

RK You mentioned your mentor, who would be your class teacher you were placed with. How might they support your learning then? What would you be hoping or expecting that they might do or contribute?

PG2 I think I'm expecting and I'm hoping it will be someone who I can ask questions of and they can give me honest answers and really just to see how they work as a teacher I think for me it will be really just see how they do all aspects of the job. So not just the actual hands-on teaching in the classroom stuff, how they manage their time, and how they take all aspects of - how they deal with all aspects of their teaching because it's neither just something where you sit in an office and do paperwork and it's neither something where you're just standing there in the classroom and teach. How do they manage that? How do they balance everything?

JL JL SL RE LC TR TR TR TR PS

The whole job - not part?

RK OK. And from what you know of the PGCE placement together the structure of the year and so on so far, which might not be a huge amount, what are the pros and cons do you think are likely of the PGCE as a way of learning to teach, as a training route?

Feedback from critical partner after this exercise (27.05.11):

I have had a go at coding the data and have found this process really, really illuminating; thank you for sharing it with me.

I humbly present my thoughts below;

1. Though I may have used different language, my coding matches those codes you have established; the categories also capture these codes and offer contingent, clear and succinct categorical definitions. Hence I would conclude that this process has been systematic and rigorous – I can connect with the categories and codes that have been established; they are plausible.

2. I think that because I have some background as a counsellor, I am tending to hear more emotions in the transcript than are implied in the categories. If I were to paraphrase the messages I am tending to pick up (loud and clear) these paraphrases would be;

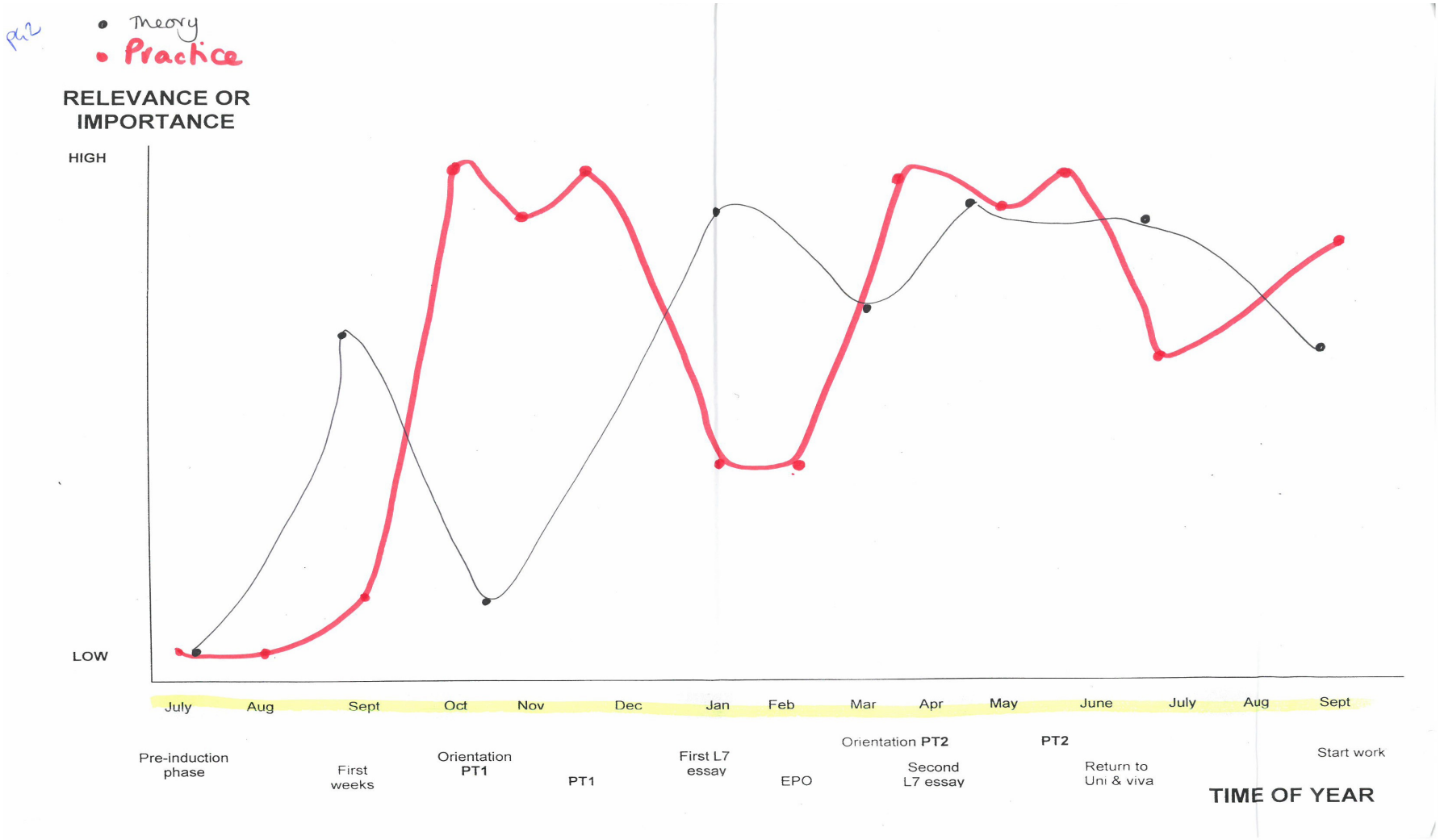
'It takes courage to stick with training to teach; I have to use a range of techniques to keep my courage up'
'There are some things that I am really scared of; what if I just can't connect with children and they don't respect me or understand me? , what if I lose control (of myself and of the class)? What if I can't connect with the adults in the school? What if I get the legalities wrong or behave unprofessionally? Getting the theory right is the least of my worries (and it doesn't frighten me like being in the classroom does) but when the uni forces me to prioritise it I am irritated at the time but I am glad they did because somehow, it gives me a more secure footing on which to base my problem solving; it helps me feel more resourceful.

Appendix 3.4: Sample Interview One Schedule

1. You might remember this question from your interview: What are the qualities of effective teachers?	What do you base those views on?	
	Why is that so important?	
2. Could you talk about what you think student teachers on a PGCE programme need to *know* about in order to be effective in the classroom?	Which of these is the most important?	Why is this most / least important?
	Are there any specific things on *your* agenda that you feel you need to find out more about?	Why are they so important to you?
	Do you think there is a specific, separate body of professional knowledge for teachers?	What kinds of things might teachers know about that most people do not?
		Would you consider teaching a 'profession'?
		What does it have in common with other professions / how does it differ?
	Do you think there is a specific, separate body of professional knowledge for teachers?	Are there such things as 'universal' ideas in education
		Do findings from educational research have a place in a teacher's knowledge?
3. We've talked about what you're going to learn. Now I'm interested in your views on *how* this might be learned. Can you describe *where* you think your learning to teach is going to take place?	What do you think you will learn in school?	How will your mentor support this learning?
		Are there any other ways that you might learn in school?
		Is learning on the job alone sufficient?
	What do you expect to learn from the university-based parts of this course?	How do you think the team here decide what to include in your sessions?
		Do you think that preparing for and completing assignments will support your development as a teacher?
		What do you hope to get from Masters level study specifically?

	Is there a place for independent study too?	What might you learn from this?
	From what you know so far, what do you think the pros and cons will be of the PGCE as a training route?	In what way would more time in school / university be advantageous?
		Will be there be any difference in a newly qualified teacher from this route compared to a teacher from other routes (e.g. BEd)?
4. As we've discussed, learning to teach draws on many sources and in two key setting (university and school) How easy do you think it will be to make links between the various sources of knowledge about teaching?	In terms of the organisation of the course, what do you think would help you to make these links?	
	Do you foresee any challenges?	How could these be overcome?
	How do you think qualified teachers go about improving their practice?	How does this take place in school?
		How does this take place beyond school?
		What might they need to focus on specifically?
5. Finally, is there anything else arising from what we have discussed that you would like to add? Is there anything you'd like to ask me?		

Appendix 3.5: Sample 'story line' graph from Interview Three



Appendix 3.6: Focus group schedule

Resources:

- Audio recorder
- Video camera & tripod
- Sign for door
- Refreshments
- Note taking materials

Preamble		
• Ethics (confidentiality, recording methods, right to withdraw, separation of roles) • Purpose of the study: an interest in the *process* of learning to teach • Purpose of FG (diff type of data; group interaction; construction of meaning) • Ground rules of FG (my role, one speaker at a time if possible)		
Introductions (not recorded)		
• Introduce selves: name and pre-course background		
Discussion (recorded)		
	Discussion points	possible prompts
What?	You've now been on the PGCE for just over three months. What have you learned *so far* about being a teacher?	Can anyone learn to be a teacher?
What?	If we talk about teachers' professional knowledge, what do you *now* take that to be?	
How?	Before the course you may have had expectations about how you would go about learning to teach. Has anything about the *process* of learning to teach surprised you so far?	
Where?	Thinking about the *whole* PGCE experience so far, including school and university, which elements have been most relevant to your development as a teacher?	*How* did the learning in school / university take place?
how?	To what extent have you been able to make meaningful links between the university and school parts of the course?	Is making sense of how it all fits together a gradual process or are there moments of sudden realisation?

how?	From your experiences over the first three months of the course, is there anything you would do differently?	
where?	*(when 'theory' has been spontaneously mentioned by a participant)* What does theory mean to you in the context of learning to teach and what is its role?	
	Would anyone like to add any final thoughts about the issues we've discussed?	
Concluding comments		
• Thanks. • Was that interesting? • Next steps (respondent validation; next data collection)		

Appendix 3.7: Sample prompt card for respondent validation discussion

Appendix 3.8: Reflective diary entry guidance

1) Guidance in email:

Thanks for your help once again with this final reflective diary at such a busy time. As discussed, please select one lesson for your reflection from the **week commencing May 14th 2012**. It should be a lesson (in any subject) that you feel was at least reasonably successful.

Please type your reflection onto the attached document. You may write freely but some prompts are provided at the top to guide the coverage. As was the case last time, there is no set length but a few hundred words will be sufficient.

Unlike the 'public' reflection on your RRP, I will be the only person able to match your identity to your comments in this case. In order to maintain this anonymity, please just e-mail back the attachment without your name on it and I will then assign a code known only to me. Please e-mail this back by May 28th

*** This time, please could you also attach the lesson plan and, *if you choose*, any other 'artefacts' that go with the lesson that can be *easily* sent electronically (e.g. resource used, link to website, photo of work etc) ***

If you have any queries, please don't hesitate to contact me.

2) Front page of record document:

Please select a lesson from this week that you feel went well and reflect on the thinking, knowledge and skills that contributed to this outcome.

Please write freely, but try to cover the following issues:

- In what way was this lesson a success and what contributed to that success?
- What decisions did you make before the lesson (planning) and during the lesson?
- Were there any dilemmas at any point?
- What knowledge and understanding did you have to draw on for this lesson?
- What experiences and learning (from aspects of this course or elsewhere) helped and enabled you to teach this lesson successfully?
- What might have helped you to make the lesson even better?

Please feel free to also (not instead) annotate the lesson plan *if you wish*.

Appendix 3.9: Whole cohort questionnaire

Research study: 'The Emerging Professional'

Thank you for agreeing to complete the questionnaire on the reverse of this sheet.

When you have completed the questions overleaf, please consider whether you have any further comments to add about the issues raised by these questions. If so, please add them below.

Ethics statement

Participation in this project is completely voluntary and there will be no negative consequences should you decide not to participate. It is also important to recognise that, if you do decide to participate, you may withdraw from the project at any time and, once again, there will be no negative consequence. This project is entirely separate from your PGCE study and your progress on the PGCE programme will not be affected by any decision relating to participation or by any answer given in the course of the project.

All data gathered will be securely stored (complying with the Data Protection Act) and will be anonymous. Data will be destroyed when the study and its dissemination is complete.

Many thanks, Rupert Knight

Appendix 3.10: January 2012 triangulation of 'the journey so far' with wider PGCE cohort (n= 76)

	% agreement	***(A) Expectations* immediately before the course began**	**(B) Views after PT1 in school**	**% agreement**
1. Pupils' learning	86	The main concern is with engaging learners and fun: maintaining attention while 'delivering' lessons.	A greater awareness of differing learning needs due to age, ability etc and more emphasis on children constructing their own learning	95
2. Teacher knowledge	79	Seen chiefly in terms of factual knowledge of subject, curriculum and policy.	A broader view also encompassing knowledge of pedagogy and practices (e.g. planning and assessment).	97
3. Being a teacher	67	Teaching is seen as a profession but there is limited appreciation of the diversity of roles.	Teaching as a profession is all-consuming and there are more dimensions to the role than were expected initially.	86
4. Learning in school	78	Seen as important. Thought of mainly in terms of observing and getting ideas from others.	Highly valued, primarily for the opportunity to experience and develop through hands-on teaching.	100
5. The student -mentor relationship	88	Mentor is someone to observe as a role model. Process not seen as particularly problematic.	The relationship with the mentor is at the heart of the practice and has a big impact on student outcomes.	91
6. University sessions and assignments	88	Useful in terms of giving basics and background to enable survival in school.	Some useful ideas to apply but also valuable as a space to reflect on practice, share views and make sense.	84
7. The nature of theory in	71	Not high on the agenda as something	Theory now seen as less black and white – can be viewed more as tentative guidelines that can	95

education		‘separate’ but a feeling that there must be some sort of knowledge base for teachers	be questioned / challenged	
8. The role and value of theory in education	92	Ideas (e.g. based on books / research findings) might be learned at university and applied in the classroom.	A realisation that theory is also useful in making sense of practice retrospectively: explaining why or how something happened.	92
9. Reflecting and linking	74	Linking learning from school and university is not seen as a particular issue. Reflection might be useful.	When in school, university and one’s peers can seem very distant. Having time and space to reflect on experiences is very valuable.	89
10. Coping and emotions	100	The PGCE is going to be an intense experience with a high workload. There is excitement but uncertainty about what is to follow.	The workload is even more than expected and emotions such as self-doubt and confidence play a large part in school experience.	86

Commentary / reflections

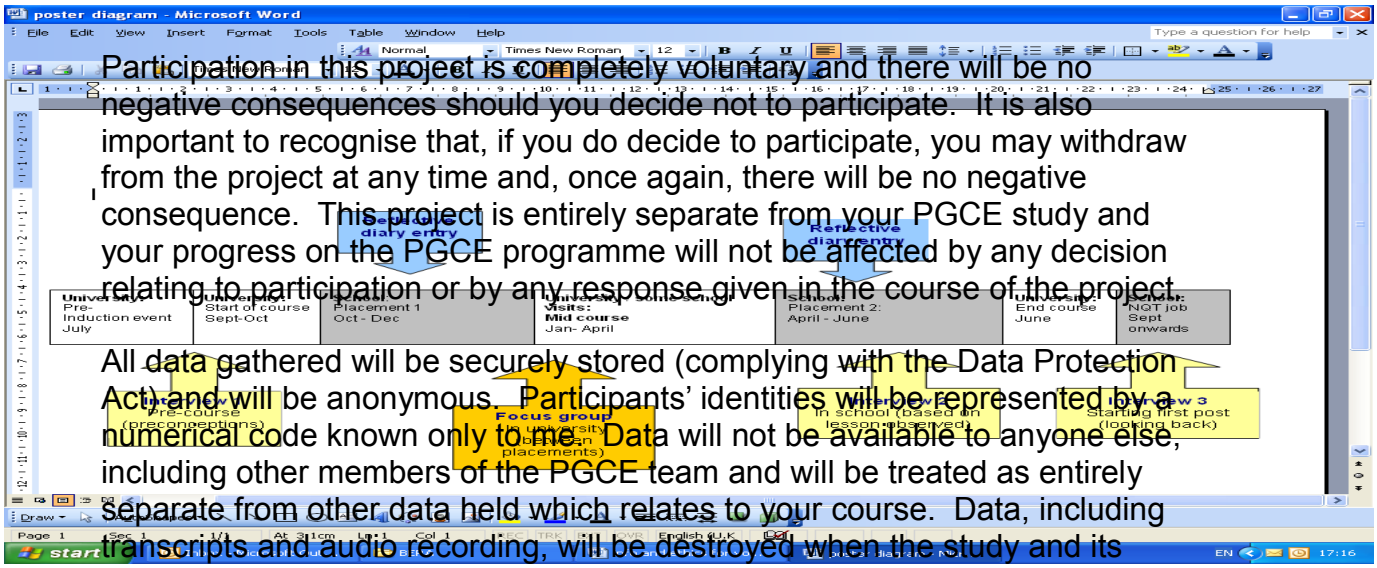
- Overall a strong degree of agreement from the cohort as a whole. Current / post PT1 statements received stronger agreement than preconceptions.
  Average agreement level for pre-course findings: 82.3 (standard deviation 9.7)
  Average agreement level for midpoint findings: 91.5 (standard deviation: 5)
  There seems to be much more coherence around the findings at midpoint (*is this perhaps partly because it is harder to think oneself back into previous patterns of belief?)*

- Considering statements with <80% agreement. These are flagged up as worthy of careful scrutiny as the research proceeds

Preconception: Teaching is seen as a profession but there is limited appreciation of the diversity of roles. **67%** agreement	The data from the interviews suggests that participants underestimated the complexity of the role. A third of the cohort are suggesting that they were aware of this from the start.
Preconception: [theory is] Not high on the agenda as something 'separate' but a feeling that there must be some sort of knowledge base for teachers **71%** agreement	Perhaps theory is more prominent in the students' minds than the case group interviews would suggest
Preconception: Linking learning from school and university is not seen as a particular issue. Reflection might be useful. **74%** agreement	Perhaps some did anticipate a difficulty in making links
Preconception: [Learning in school is] seen as important. Thought of mainly in terms of observing and getting ideas from others. **78%** agreement	Case group didn't explicitly mention learning through experience but perhaps this was implicit
Preconception: [Teacher knowledge is] seen chiefly in terms of factual knowledge of subject, curriculum and policy. **79%** agreement	Again, suggests a possible underestimation of prior awareness of complexity

Appendix 3.11: Sample information used for voluntary informed consent

The emerging professional: prospective teachers' conceptions of learning from theory and practice before, during and after a PGCE programme.



Participation in this project is completely voluntary and there will be no negative consequences should you decide not to participate. It is also important to recognise that, if you do decide to participate, you may withdraw from the project at any time and, once again, there will be no negative consequence. This project is entirely separate from your PGCE study and your progress on the PGCE programme will not be affected by any decision relating to participation or by any response given in the course of the project.

All data gathered will be securely stored (complying with the Data Protection Act) and will be anonymous. Participants' identities will be represented by a numerical code known only to me. Data will not be available to anyone else, including other members of the PGCE team and will be treated as entirely separate from other data held which relates to your course. Data, including transcripts and audio recording, will be destroyed when the study and its dissemination is complete.

At the end of the study, a summary of findings will be sent to you if you wish.

Please do not hesitate to contact me for further information.

Rupert Knight
[contact details]

MEMO the journey
Date 26.5.12
Subject different versions of the journey so far
Strong sense of journey conveyed: PG4's car journey metaphor (290) – can't remember how you got there The difficulty of recalling how / when they came to realise / change views PG2 / PG4 university feels a long way away, feeling like a different person PG2 (215 onwards) on feeling like a student at university and a teacher in school – keeping up a front. PG1 (112) naivety of PT1

Appendix 3.12: Sample memo

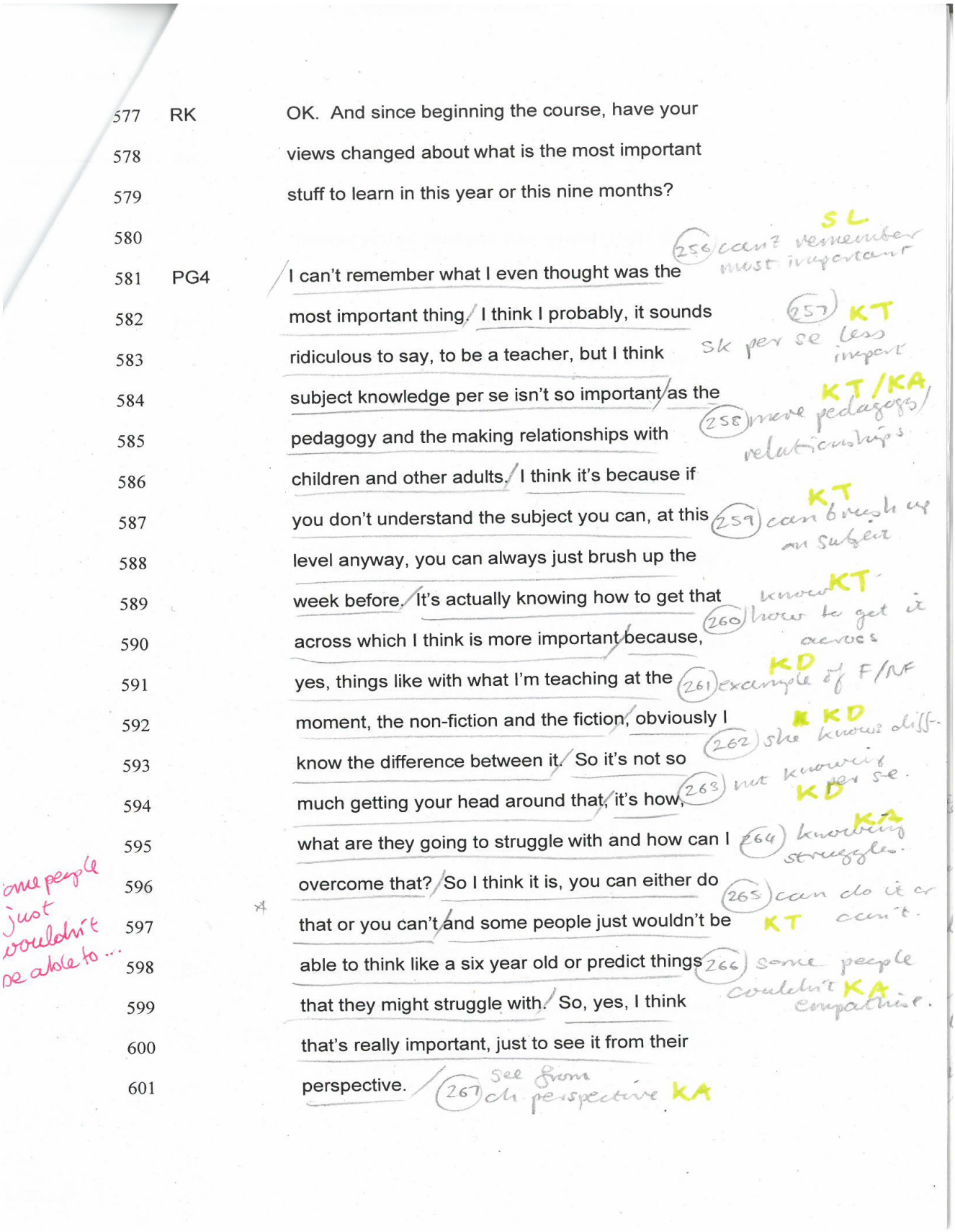
Appendix 3.13: Sample coding hierarchy

CODING HIERARCHY INTERVIEW 2

	Category / theme description	*code*
TEACHER KNOWLEDGE (what)	**Teacher attributes and knowledge** • Subject knowledge • Characteristics of teachers • Own understanding of the role	**KT**
	Content, decisions and judgements about teaching • Content of own lessons • Justifying decisions • Organisation and time management	**KD**
	Awareness of children's needs • Ways children learn • Engaging learners • Children's needs • Catering for different needs • Children as individuals	**KA**
SOURCES OF LEARNING To TEACH (where)	**Learning through doing - practice** • Own teaching experience • Own experience of other aspects e.g. planning	**LP**
	Learning from the mentor • Observing student / feedback • Discussion • Mentoring style • Observation of mentor / modelling	**LM**
	Learning in other ways in school • Teamwork • Other teachers • ULT visit	**LO**
	The place of theory • The nature of theory	**LT**

	• Awareness of theory • The role of theory	
	Learning through university • University taught sessions • assignments	**LU**
MAKING SENSE OF LEARNING TO TEACH (how)	**Developing as a learner** • growing awareness • realisations • changing attitudes • own developing attributes	**SL**
	Links between school and university • interweaving the learning from two sources • Course structure	**SU**
	Reflecting • Official (RRP etc) • Other / personal reflection • Collaborative reflection	**SR**
	Comparing school settings • Types of school • Differing mentoring styles	**SS**
	The emotional dimension • Moods and feelings • Confidence / reassurance	**SE**

Appendix 3.14: Sample page of coded transcript from Interview Two



577 RK OK. And since beginning the course, have your
578 views changed about what is the most important
579 stuff to learn in this year or this nine months?
580
581 PG4 I can't remember what I even thought was the
582 most important thing. I think I probably, it sounds
583 ridiculous to say, to be a teacher, but I think
584 subject knowledge per se isn't so important as the
585 pedagogy and the making relationships with
586 children and other adults. I think it's because if
587 you don't understand the subject you can, at this
588 level anyway, you can always just brush up the
589 week before. It's actually knowing how to get that
590 across which I think is more important because,
591 yes, things like with what I'm teaching at the
592 moment, the non-fiction and the fiction, obviously I
593 know the difference between it. So it's not so
594 much getting your head around that, it's how,
595 what are they going to struggle with and how can I
596 overcome that? So I think it is, you can either do
597 that or you can't and some people just wouldn't be
598 able to think like a six year old or predict things
599 that they might struggle with. So, yes, I think
600 that's really important, just to see it from their
601 perspective.

Appendix 3.15: Example of analysis format used to record claims and evidence base: excerpt from Interview Two

Claims	Evidence base			
The place of theory (LT)	**PG1**	**PG2**	**PG3**	**PG5**
All five students **agree with the composite definition** based on the focus group comments	116	151,160	91-92	89
There is a clear view of **theory as being provisional** and open to challenge…	118-120	152-165	88-92	
…as well as **dependent on context**	118.5, 129		97,98	104
There is an acknowledgement that **theory has an influence on practice**…	121-124, 136, 138	168, 171, 178-181	95, 96	88, 91-97
…but two students assert that this **isn't a conscious influence**		166, 173, 177		
It is still felt that **theory can help to make sense of practice retrospectively**, but it is difficult to cite specific examples of this happening.	125-127	182-185, 188, 189	103	105-107, 110
Two students say that it's **easier to ignore theory** and simply carry on doing the same thing				98
When asked directly, all students can see **themselves as theorists** in the sense of developing their own ideas from practice…	128, 129	191-197	99-102	99-102
…but there is a **notable sense of tentativeness and uncertainty** when discussing this. It seems to be a concept they had not previously considered.				
Three students laugh when they are asked about this and this is also seen in the phrasing of their immediate responses:				

'I think so' (PG1: 128) *'I don't know. I don't see why not. It just sounds funny.'* (PG2: 190, 192, 195) *'Possibly.'* (PG3: 98) *'Probably. I think I've not come up with any groundbreaking ideas.'* (PG4: 169-170) *'Well I'd like to think…Yes, I suppose so.'* (PG5: 99, 101)				

Appendix 3.16 Questionnaire statements showing mean and standard deviation (SD) calculations

Statement	Pre-course (July 2011) n=87		Post-course (June 2012) n=58
	Mean	SD	SD
1 Teaching, as a profession, has a specialist body of knowledge that all teachers need to be aware of.	3.59	0.52	0.43
2 Becoming a good teacher involves understanding not only *what* teachers do, but *why* they do it.	3.64	0.51	0.31
3 Teachers need knowledge about principles of learning and teaching that go beyond any particular school and that can be applied in a range of contexts.	3.74	0.44	0.43
4 The knowledge that teachers require is learned mainly in school.	2.68	0.78	0.72
5 Study at university is important in becoming a teacher.	3.23	0.56	0.56
6 In order to improve their practice, teachers need to look beyond their own classroom.	3.76	0.43	0.43
7 Learning to teach is mainly a matter of practice and personal experience.	2.80	0.76	0.74
8 Teachers should draw on educational research findings to help improve their own classroom practice.	3.15	0.60	0.46
9 It is important for teachers to research their own classroom practice.	3.38	0.55	0.52
10 Studying Education at Masters level has benefits for a teacher's classroom practice.	2.97	0.66	0.70

Appendix 3.17: Summary of findings from four phases

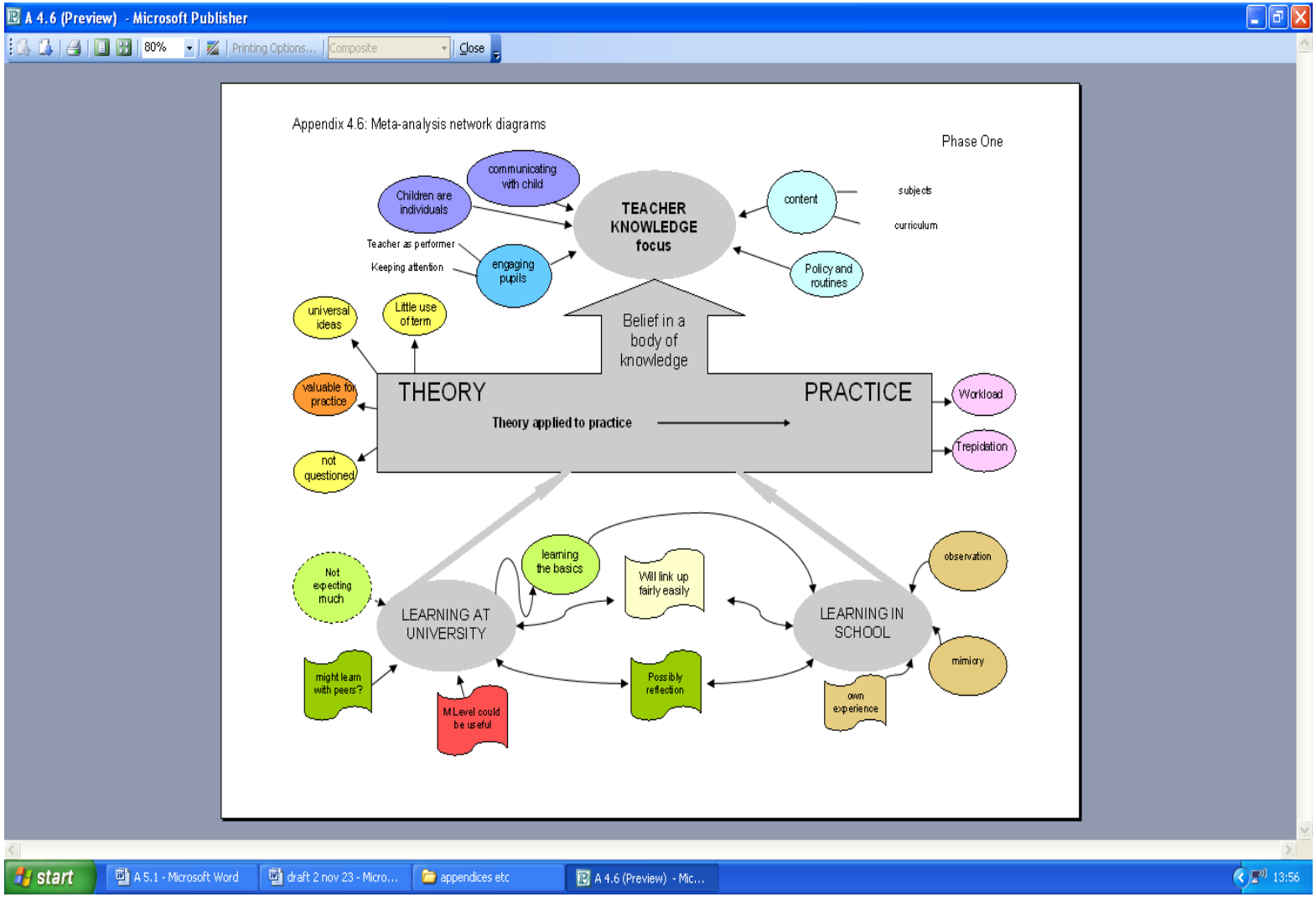
	What constitutes teachers' knowledge?	What is the nature and role of theory in education?	What is learned in school and how?	What is learned at university and how?	How does learning link and make sense?	What is the learning journey?
Pre course	Belief in a body of professional knowledge but vagueness about content Focus on engagement, motivation and maintaining order Emphasis on knowledge of subject *per se*, curriculum and points of official policy	Theory offers broad, generalisable principles Theory is largely accepted and not questioned Research findings and other sources of theory can be applied in practice	This is where much of the learning will take place Learning in school alone is insufficient Learning takes place primarily through observing and mimicking The emphasis is on picking up tricks of the trade	An emphasis on learning classroom management skills in the form of basic tips Open-minded but somewhat ambivalent about M Level work Emphasis on functional content: how and what to teach	Linking learning is not expected to be very difficult PGCE has been chosen partly for its structure Reflection and discussion might be useful	Expectation of challenge but little mention of specific problems Anticipation of heavy workload Drawing on own background is helpful Students build on prior school experiences
Semester 1 (Placement 1)	Emerging awareness of child as a learner Emphasis on age-appropriate pedagogy beyond simply engagement Appreciation of breadth of professional practice and roles Planning is a prominent issue	Theory is more complex: many interpretations are possible Theory is useful retrospectively in 'making sense' of practice There is an overload of theory and new ideas before first placement	Learning through experience is pre-eminent Emerging realisation of the crucial influence of the mentor-student relationship Feedback on teaching is important Observation remains useful	Recognition of useful ideas to transfer to practice in the form of activities University influence is barely acknowledged while actually in school Much greater recognition of university's role as a forum for reflecting with peers	The importance of reflection is realised The complexity of reflection is acknowledged There is a slight feeling of separation between university and school University is valued as a space for making sense	A time of great change and new realisations The challenges of teaching (workload, complexity and compromise) are recognised The emotional dimension is prominent The interpersonal dimension is recognised

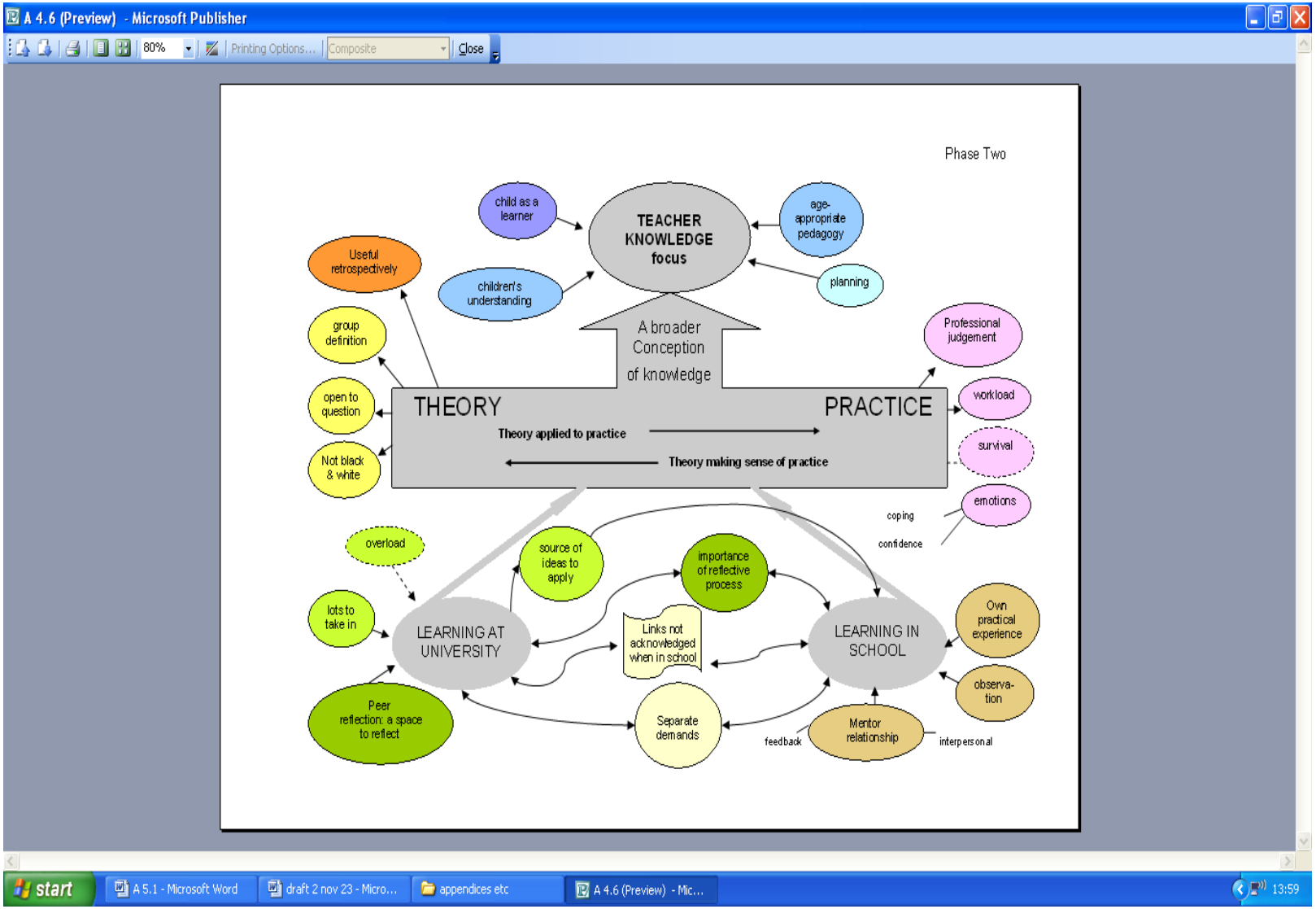
Semester 2 (Placement 2)	The learner is at the centre: an appreciation of individual needs Importance of relationships with pupils and colleagues Assessment is a prominent issue	Theory is provisional and open to question Teachers might be theorists themselves Theory does influence practice but not consciously Theory and practice are coming together and making sense as a whole	Mentoring can vary considerably Feedback on teaching is vital and takes many forms Observation of others remains important even in the midst of practice Learning takes place more widely in school: looking beyond your own classroom	Acknowledgement of the value of M Level work: especially own choice of topics Slightly more acknowledgement of university influences while in school Compared to 'overload' of initial weeks, university sessions now make more sense	The course now makes sense as a whole Ideas are better integrated on this placement Reflection has become a habitual activity – ingrained in everyday practice The course structure works well	Students start to feel like a teacher Greater confidence is evident but there is still a need for reassurance There is less overt emphasis on workload
Post course (NQT)	Facets of knowledge merged: simply the need to be responsive to children's needs Emphasis on responsibility and accountability Appreciation of the subtleties of practice	The complexity of theory is appreciated – can come from many sources Theory is useful as underpinning for practice A change in understanding is recognised Theory is more valued than ever, though not at forefront of daily practice	School is the most important setting for learning throughout the course Observation is very valuable and changes over time The two placements are very different in character Learning on additional, non-assessed placements in diverse settings has a big influence	Acknowledgement that university influence was underestimated before starting course University provides space and time for making sense of practice M Level is valued, not just for topics but for fostering a different way of thinking	There is an appreciation of course content and structure: the balance is right Students are mostly well prepared for real life in school Reflection is still important but is a personal process – its form should not be prescribed.	There is a positive retrospective view of PGCE A journey of ups and downs is recognised There is a realisation of demands and responsibility of the job There is an appreciation of how much has been learned

Appendix 3.18: Meta-analysis network diagrams

Meta-analysis diagram: key

	understanding of theory
	role of theory
	pedagogy and management
	the child
	factual knowledge
	attitudes to university learning
	ways to learn in school
	reflection
	attitudes to M level work
	issues arising from practice
	making links


A 4.6 (Preview) - Microsoft Publisher
80%
Printing Options...
Composite
Close
Appendix 4.6: Meta-analysis network diagrams
Phase One
communicating with child
Children are individuals
TEACHER KNOWLEDGE focus
content
subjects
curriculum
Teacher as performer
Keeping attention
engaging pupils
Policy and routines
universal ideas
Little use of term
Belief in a body of knowledge
valuable for practice
THEORY
PRACTICE
Workload
Theory applied to practice
Trepidation
not questioned
learning the basics
Will link up fairly easily
observation
Not expecting much
LEARNING AT UNIVERSITY
LEARNING IN SCHOOL
mimicry
might learn with peers?
Possibly reflection
own experience
M Level could be useful
start
A 5.1 - Microsoft Word
draft 2 nov 23 - Micro...
appendices etc
A 4.6 (Preview) - Mic...
13:56


A 4.6 (Preview) - Microsoft Publisher
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Printing Options...
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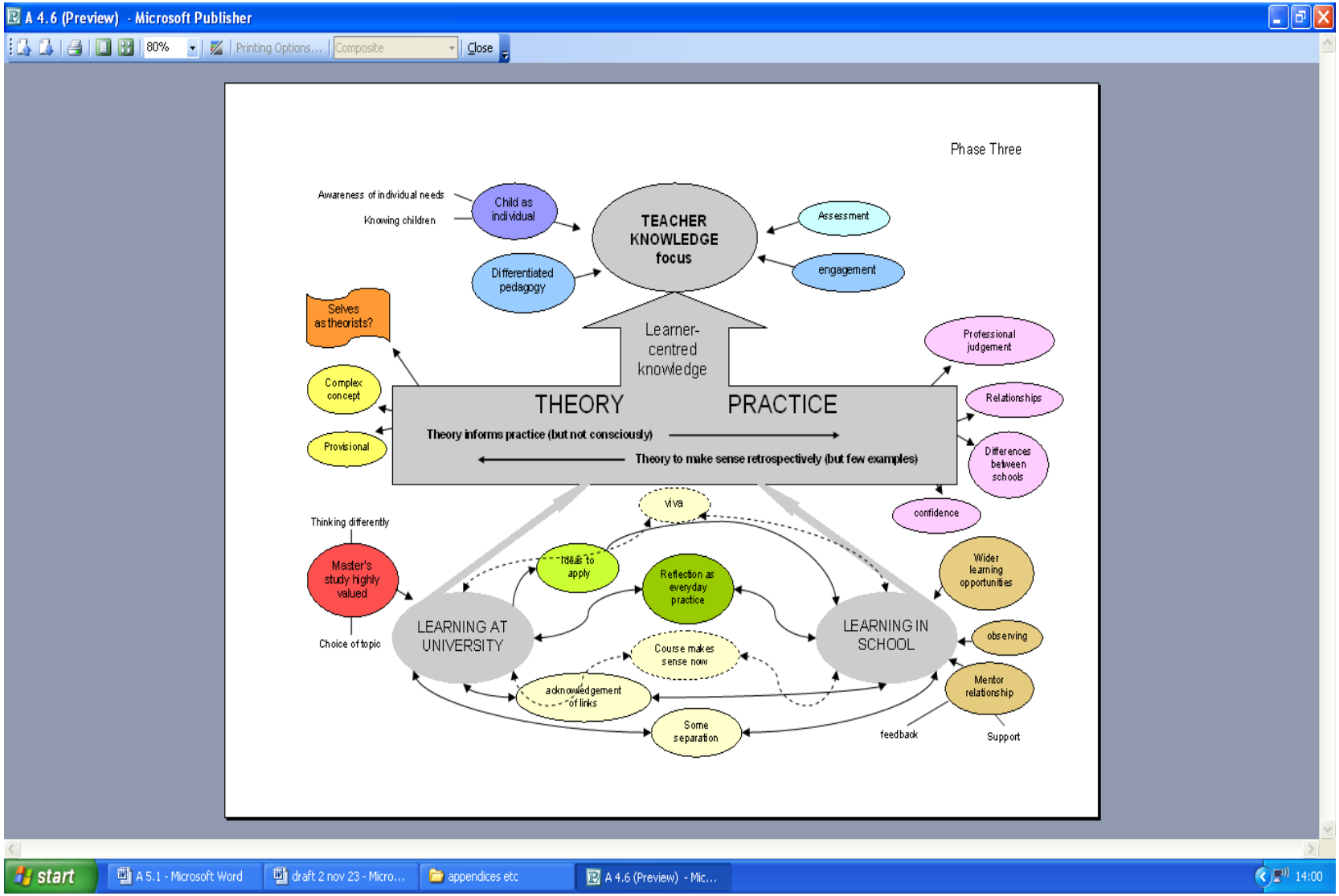
Phase Two
TEACHER KNOWLEDGE focus
child as a learner
age-appropriate pedagogy
Useful retrospectively
children's understanding
planning
A broader Conception of knowledge
group definition
Professional judgement
open to question
workload
THEORY
PRACTICE
Theory applied to practice
Theory making sense of practice
Not black & white
survival
emotions
coping
confidence
overload
source of ideas to apply
importance of reflective process
lots to take in
LEARNING AT UNIVERSITY
Links not acknowledged when in school
LEARNING IN SCHOOL
Own practical experience
observa-tion
Peer reflection: a space to reflect
Separate demands
Mentor relationship
feedback
interpersonal
start
A 5.1 - Microsoft Word
draft 2 nov 23 - Micro...
appendices etc
A 4.6 (Preview) - Mic...
13:59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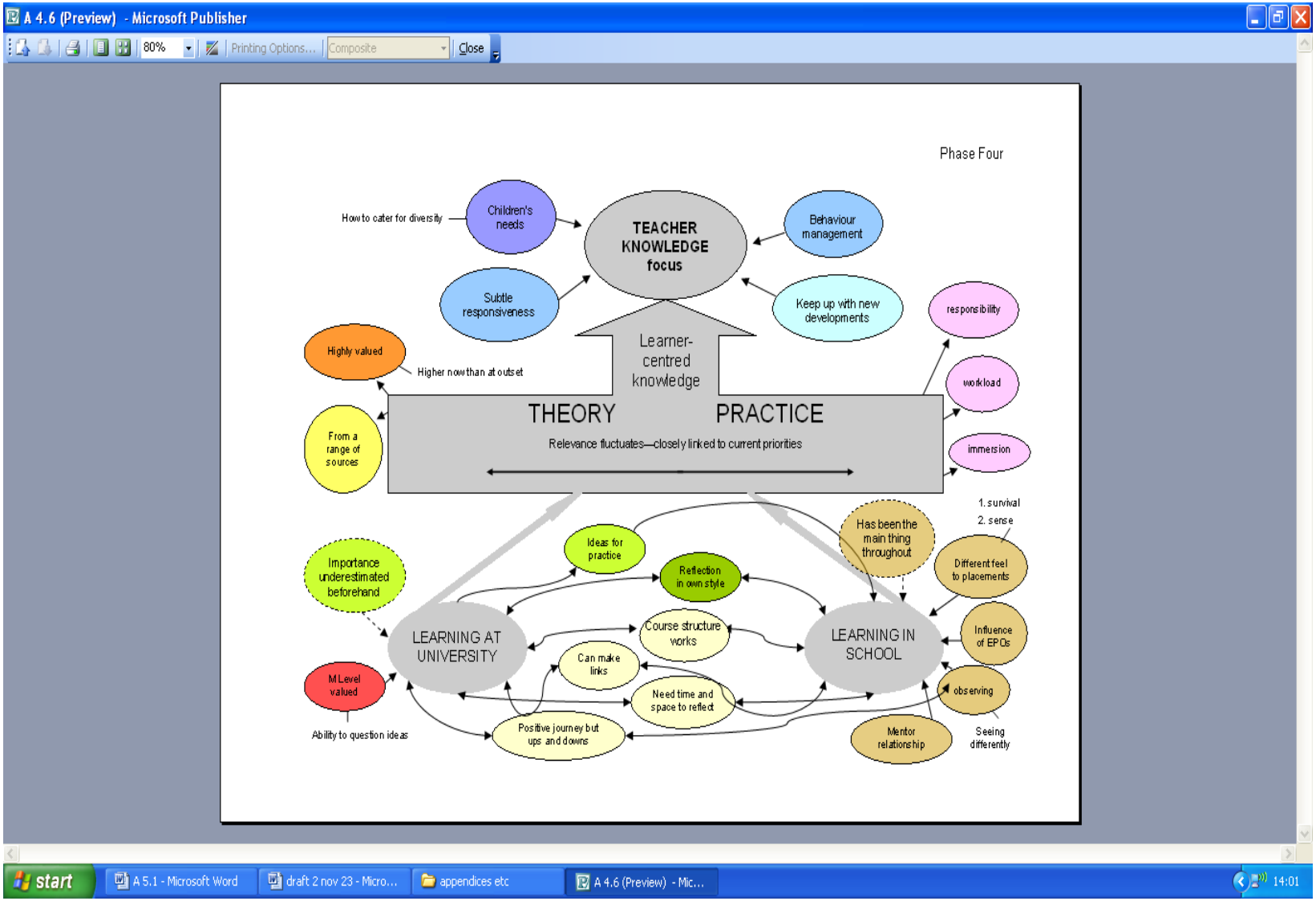
Phase Three
Awareness of individual needs
Knowing children
Child as individual
TEACHER KNOWLEDGE focus
Assessment
engagement
Differentiated pedagogy
Selves as theorists?
Learner-centred knowledge
Professional judgement
Complex concept
Provisional
THEORY
PRACTICE
Theory informs practice (but not consciously)
Theory to make sense retrospectively (but few examples)
Relationships
Differences between schools
confidence
viva
Thinking differently
Master's study highly valued
Choice of topic
Ideas to apply
Reflection as everyday practice
Wider learning opportunities
LEARNING AT UNIVERSITY
LEARNING IN SCHOOL
observing
Course makes sense now
acknowledgement of links
Mentor relationship
Some separation
feedback
Support
start
A 5.1 - Microsoft Word
draft 2 nov 23 - Micro...
appendices etc
A 4.6 (Preview) - Mic...
14:00


A 4.6 (Preview) - Microsoft Publisher
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Printing Options...
Composite
Close
Phase Four
How to cater for diversity
Children's needs
TEACHER KNOWLEDGE focus
Behaviour management
Subtle responsiveness
Keep up with new developments
responsibility
Highly valued
Higher now than at outset
Learner-centred knowledge
workload
THEORY
PRACTICE
From a range of sources
Relevance fluctuates—closely linked to current priorities
immersion
1. survival
2. sense
Has been the main thing throughout
Ideas for practice
Importance underestimated beforehand
Reflection in own style
Different feel to placements
LEARNING AT UNIVERSITY
Course structure works
LEARNING IN SCHOOL
Influence of EPOs
Can make links
M Level valued
Need time and space to reflect
observing
Ability to question ideas
Positive journey but ups and downs
Mentor relationship
Seeing differently
start
A 5.1 - Microsoft Word
draft 2 nov 23 - Micro...
appendices etc
A 4.6 (Preview) - Mic...
14:01

Appendix 4.1: Annotated focus group extract: What is subject knowledge?

RK Just now you mentioned teaching being a profession as well as a job. Back in September I asked you about teachers having a body of professional knowledge. What would you now think teachers' knowledge, professional knowledge is? What things are part of that knowledge?

PG3 I feel like subject knowledge might be a big part of it, even though I feel that lower down you might not necessarily, lower down in the school, like the nursery, you might feel you're equipped enough to teach them. Because I felt being in nursery it was quite difficult to extend my subject knowledge…

PG4 Yeah

PG3 …because I felt like I'd got adequate knowledge to teach them, but as you go further on, your subject knowledge and what you might need to know to answer questions that they ask you, it's definitely going to be a…

PG1 It's a different way of teaching though isn't it? Because I mean I was Year Four so actually my subject knowledge had to be quite good about certain subjects but the way I taught would be entirely different to how you would and the language you use and, you know, what you use to teach them would be probably quite different. So actually, yours is no less, it's not about, what I'm trying to say is it's not about the actual academic level of knowledge…

PG3 It's about being adaptable.

PG1 Yeah, but you'd know more about it in different ways than I would, but I'd know perhaps different things at a different level

PG4 Yeah, for subject knowledge, say we were looking at sources of light, obviously I know what a source of light is and what isn't. So it's, you don't really need to extend that any further but then it's knowing how to teach that to a three year old.

PG5 Break it down

PG4 Yeah. So I think subject knowledge in terms of pedagogy at nursery or in EYFS and then the actual curriculum itself. Because the early years curriculum is so different from the Key Stage One, Key Stage Two. So I think subject knowledge in terms of that as well is one of the biggest things.

PG1 Yeah

PG4 And getting used to early learning goals and…

PG5 Yeah, that's something I found really difficult actually. Trying to, you get a strand from the National Curriculum but then it's deciding whether you need to split that into a series of lessons or whether you can just cover that in one lesson and it's taking the learning objectives out of that one strand. I think that's a really important skill for teachers to have.

Appendix 4.2: Annotated focus group extract: 'And what is theory?'

RK And what is theory?

PG3 Ideas, other people's ideas, other professionals' ideas.

PG5 I think back to that VAK, visual, auditory and kinaesthetic thing they showed us. That was a surprise for me to learn, because I'd always heard of that and thought, I didn't ever think much about it. But they showed us how you could think about, on the flipside, about how it's not necessarily the best thing for children in your class and so you might be starting to think of how better to organise your class for learning and how you can individually target children. Just through seeing the research and then highlighting how it's not always the best thing.

PG4 Theory is, it's an idea based on, it's obviously based on solid research and findings of…

PG3 Previous experiences

PG4 …it's a perspective isn't it?

PG3 Yes, a perspective.

PG4 Based on research and facts

PG1 Hmm. But I guess it's not. It's a theory, it's not a fact.

PG4 Exactly.

PG1 It's kind of only as good as whoever's, whoever's researched it, but…so hmm

PG4 And how well you interpret the theory…

PG1 It's keeping an open mind, though isn't it? Like it's not 100% concrete…

PG3 It might work for some people but it might not work for others.

PG1 …maybe a good aid.

PG4 Yeah it is, it's not so black and white, it's taking elements of different theories and coming, coming up with your own strategies.

PG5 Using them as guidelines *(general agreement)*

Appendix 4.3 Summary of individual differences

	What is teacher knowledge?	What is the nature and role of theory in education?	What is learned in school and how?	What is learned at university and how?	How does learning link and make sense?	What is the learning journey?
Pre course	PG2 – not something anyone could learn to do (IV 1: 36) PG3 – doesn't refer explicitly to engaging pupils – more about knowledge (IV 1: 11) PG4 - Not anyone could learn to teach (IV 1: 31) PG5 - less sure about a body of knowledge – teachers create own knowledge (IV 1: 16)	PG1 – some scepticism about theory even at outset (IV 1: 45) PG5 – only explicit reference to *transferring* theory into practice (IV 1: 61)		PG1 – more reserved about M Level (resp val June)	PG4: expects a moment of 'epiphany' (IV 1: 78)	PG1 – less experience on which to draw (emerges later: IV 2: 150) PG2 – worried about academic side (IV 1: 62)
Semester 1 (Placement 1)		PG1 – less change in view of what theory is than others (FG: 320)	PG2 – negative experience with first mentor (IV 2: 132) PG3 – belief that learning takes place easily (FG: 99) PG5 – issue of mismatch with mentor's style (FG: 139)		PG3 – would like EYFS specialist university staff for school visits (FG: 142) PG5 – ambivalence about reflection (essay: 2; FG: 180)	PG4: much more emphasis on emotions than others (FG: 418)
Semester 2 (Placement 2)		PG5 – difficulty with transferring theory to practice (IV 2: 93)	PG4 – more emphasis on collaboration with mentor (IV 2: 101; essay: 35) PG4 – first EYFS placement didn't seem like real experience (IV 2: 132)		PG2 – still a separate feel to university and school and this is an advantage (IV 2: 211-212)	
Post course (NQT)		PG5 – theory not really prominent as NQT (but will resurface later) (IV 3: 52) PG5 – still discussing theory in terms of proven facts (IV 3: 73, 111)		PG4 – slightly questions value of academic assignments in learning to teach (IV 3: 150)	PG1 – feels less well prepared for NQT year PG3 – likes the prescribed form of written reflection (IV 3: 108-109) PG5 – later realisation of value of reflection (IV 3: 115) PG5 – one discrepancy between what told on course and what told in school (IV 3: 201)	

Appendix 5.1 Example of Record of Reflective Practice (RRP) format

T1 - TEACHERS MUST: Set high expectations which inspire and motivate pupils.					
Date	**Evidence base**	**Description and reflection**	**SMART target**	**Revisit Date**	**Mentor's Initial**
	e.g. Observation sheets; TP Reports; Witness statements; Weekly reviews				

Appendix 7.1: Dissemination log

Dissemination already undertaken			
Date	Action	Purpose and audience	Impact
Sept 2010	Before main project commences: Article in Primary Science, making a claim for a broader view of theory and looking at everyday 'theory building' in the classroom. Knight, R. (2010) A theorist in every classroom, *Primary Science* 114	Sharing, for a school-based audience, one of the drivers for the project and a rehearsal of some of the underlying ideas.	No direct feedback received, but useful practice at articulating some of these ideas
Sept 2011	As main data collection is about to commence: Brief slot at the Primary team meeting Sept 1st to introduce research and discuss pilot findings. Pilot summary document and A4 version of BERA poster provided as handouts	Raise awareness among team in order to solicit feedback Share some very tentative thoughts based on piloting in the hope that this will be useful for their practice Ethically, to ensure that colleagues are informed about, and in agreement with, about what I am doing, as it intersects with their practice	Team made fully aware Lots of positive comments received in terms of its relevance to the PGCE programme and some specific correspondence with one colleague whose own research overlaps slightly: useful articles exchanged.
Sept 2011	Attendance at BERA 2011 at Institute of Education, London with a poster presentation.	Raise awareness with wider ITE community and solicit feedback A first go at disseminating to the education	Winner of BERA prize: Best Early Career Researcher Poster. Useful discussions with viewers of the poster:

		research community and a chance to see how others disseminate in this forum.	reinforced relevance of topic and confirmed wide interest. Some comments /questions also useful in challenging the research design: food for thought. Several requests for poster to be sent to others, so the potential for some useful contacts. Led to an invitation to speak at Leicester University lunchtime staff seminar.
Oct 2011	Findings from first interviews shared with PGCE programme leader	Helps to inform the design of a new PGCE ready for revalidation that is currently ongoing	PGCE can be revalidated with students' voices to the fore, taking into account early findings.
Jan 2012	Presentation of a paper at the University's 'New Horizons' conference for new researchers	A chance to share early findings (from first round of data collection) with a different audience. An opportunity to get feedback from peers in other subject areas and to practise presenting in this way.	Allowed consideration of how best to present methodological issues / dilemmas to an audience
March 2012	Article published in the 'research notice board' section of the Journal of Education for Teaching: International research and pedagogy Knight, R. (2012) The emerging professional: an investigation into teacher	Raise awareness with wider ITE community and solicit feedback First contact with / appearance in a peer-reviewed journal that will be a target for later articles	Awareness raised (though no direct responses)

	education students' developing conceptions of the relationship between theory and classroom practice before, during and after a postgraduate teaching programme, *Journal of Education for Teaching: International research and pedagogy: International Research and Pedagogy*, 38(2), 209-210		
March 2012	Presentation at University of Leicester's 'Food for Thought' seminar	Sharing with counterparts from another university. An opportunity for feedback but also triangulation -to what extent do they recognise these findings at Leicester?	Raised useful questions to address Early, emerging findings shared with professional colleagues.
May 2012	Presentation of a paper at annual TEAN annual conference at Aston University (tentative findings from ongoing analysis)	Sharing with wider ITE audience	Raised useful questions to address Early, emerging findings shared with professional colleagues
Jan 2013	Dissemination of initial analysis to PGCE programme leader through a meeting (discussion recorded for informal analysis) and handouts adapted from findings sections.	1) solicit feedback on relevance and aspects for further analysis 2) help to inform design of new PGCE and School Direct programmes	Research influences, and is directly cited in, meetings and presentations at which programme design is discussed. New lines of enquiry are found based on notes from conversation
March	Paper published in peer-reviewed TEAN	1) solicit feedback from reviewers on how findings	Allowed presentation of findings to be trialled

2013	journal. Paper reports on first phase of data (preconceptions) Knight, R. (2013) It's just a wait and see thing at the moment: students' preconceptions about the contribution of theory to classroom practice in learning to teach, *Teacher Education Network Journal* 5(1), p 45-59	are reported - a 'rehearsal' for thesis 2) share initial findings with wider ITE audience	and refined, in line with reviewer feedback. First experience of writing for a peer-reviewed journal, so experience of the process and expectations was very valuable. Shared with the ITE community the outcomes of the first phase of the research.
Sept 2013	Paper presented at BERA 2013 at University of Brighton (Early Career Researcher Conference).	Share findings with wider education research audience. First opportunity to present and discuss the complete set of data	Very positive feedback, including follow-up correspondence with one attendee Validation of the relevance of findings and a guide to aspects most of interest.
Dissemination to follow			
Date	Action	Purpose and audience	Impact
Early 2014	Dissemination to colleagues with a view to replicating study	Bring ITE colleagues up to date with results of study. Begin plans to replicate this study with school-based ITE students.	*Not yet undertaken*
Mid 2014	Paper submitted to Journal of Education for Teaching: International research and pedagogy	Share findings with wider education research and ITE audience. First opportunity to write for an international journal and add to the body of previous work in	*Not yet undertaken*

		this field published here.	
Late 2014	Article submitted to TES	Opportunity to write for a wider education audience Contribution to debate about developments in education.	*Not yet undertaken*

Appendix 7.2: Poster from BERA conference September 2011

The Emerging Professional: an investigation into teacher education students' developing conceptions of the relationship between theory and classroom practice before, during and after a PGCE programme.

Raising awareness of, and soliciting feedback on, a study beginning this academic year.

Rupert Knight, University of Derby

Aim of the study

To understand more fully the preconceptions that Initial Teacher Education (ITE) students hold about the relationship between theory and practice in learning to teach, and to investigate the way in which these preconceptions may be modified in the course of the journey to Qualified Teacher Status (QTS). Following a pilot phase, the data collection began in July 2011 and will last until September 2012.

Objectives

- To discover the initial preconceptions about teacher knowledge and learning to teach that are held before commencing ITE
- To understand ways in which these conceptions might change over time
- To understand what might cause any such development
- To find out whether there are any key points in the journey to QTS that are linked to any change
- To compare students' public and private thoughts on the role of theory and practice
- To consider any implications for the structure and content of future postgraduate ITE.

Background and rationale for this study

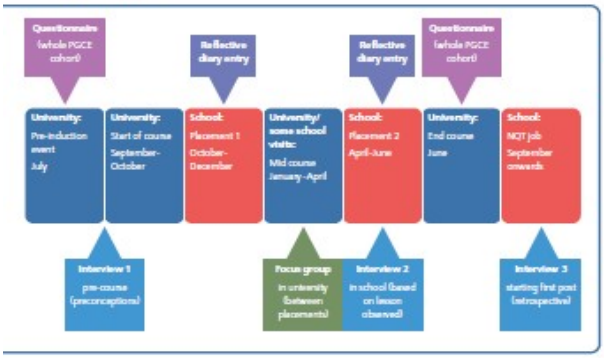
Re-examining the relationship between educational theory, currently provided largely in the university components of Initial Teacher Education (ITE), and classroom practice is particularly timely. Recent political pronouncements on teaching offer contrasting visions of, on the one hand, a Masters level profession (House of Commons Children, Schools and Families Committee, 2010) and, on the other, teaching as a craft, best learned through apprenticeship in the workplace (Gove, 2010). The proposed shift of emphasis in ITE towards school-based training (DfE, 2011) calls into question even more directly the value of and place for a theoretical basis for teaching.

This pivotal political issue links to long-standing debates on what constitutes teacher knowledge (Shulman, 2004), the division between educational theory and practice (Pring, 2004; McIntyre, 2005) and the implications for the structure of ITE (Korthagen, 2010). Previous studies, such as Calderhead & Shorrock (1997) have examined the relationship of theory and practice within the broader process of learning to teach while Hobson *et al* (2008) have specifically emphasised the need to uncover and work with students' preconceptions. The importance of such preconceptions was emphasised by Lortie (1975:61) who earlier coined the term 'the apprenticeship of observation' to describe the formation of often naive assumptions that takes place before embarking on a teaching programme.

Within this context, the study will offer new insight by charting what happens to the initial preconceptions held by students and investigating whether conceptions of theory and practice change over time, culminating in a profile of the newly qualified professional in the workplace. Nilsson (2008) stresses the importance of a better understanding of students' knowledge for teaching and advocates paying careful attention to their personal stories. As a new consensus on ITE takes shape in the coming years, therefore, an up-to-date view on the complex interplay of theory and practice from the students' perspectives will offer a valuable contribution to the debate.

Study design

This is a longitudinal case study, taking as its focus a group of five PGCE Primary students. As well as the case group itself, there is also an interest in the 'embedded' individuals within (Yin, 2009).
The participants will be followed from just prior to the course through to the early days of first employment, with a view to charting any changes to initial preconceptions. A variety of mostly qualitative data will be gathered through semi-structured interview, focus group and documentary sources. Data will be analysed in an ongoing, iterative manner (Miles & Huberman, 1994) with each phase of collection partly informed by previous findings.



Tentative findings from the pilot phase

- Initial preconceptions about learning to teach centre on 'instrumental' concerns, such as planning, organisation and behaviour management. There is little appreciation of the complexity of the role
- Midway through the programme, students are still preoccupied with 'survival' concerns relating to workload and classroom management, but these are much less evident by the end of the course
- After first school placement, with a growing realisation of the multi-faceted role of the teacher, the relevance of early university sessions is better understood. The challenge of making sense of a mass of information is strongly articulated
- Theory seems to be valued: the ability to justify or evaluate one's practice is seen as important, but uncertainty about its role is evident. The perceived importance of such ideas fluctuates over time, but not in a uniform way
- There is a strong belief that there is a specific body of professional knowledge for teachers but it is difficult to be precise about what this might comprise
- There can be difficulty in making links between university and school based components of the programme
- University is valued a reflective space, useful for making sense of practice retrospectively
- School is consistently seen as the main setting for learning, though the emphasis shifts from learning from others to learning through experience.

Questions emerging as possible discussion points

- Do we identify and sufficiently challenge students' preconceptions about learning to teach?
- Do students have too narrow a conception of what might constitute theory and theorising?
- To what extent do we perpetuate an unhelpful dichotomy in the acquisition of teacher knowledge?
- In the course of an ITE programme, how do we as lecturers model the use of theory in our practice?
- To what extent do we take into account of students' shifting concerns and experiences in the way we integrate theory into our ITE programmes?

Contact and feedback welcomed

email: **R.Knight@derby.ac.uk** phone: **01332 592231**

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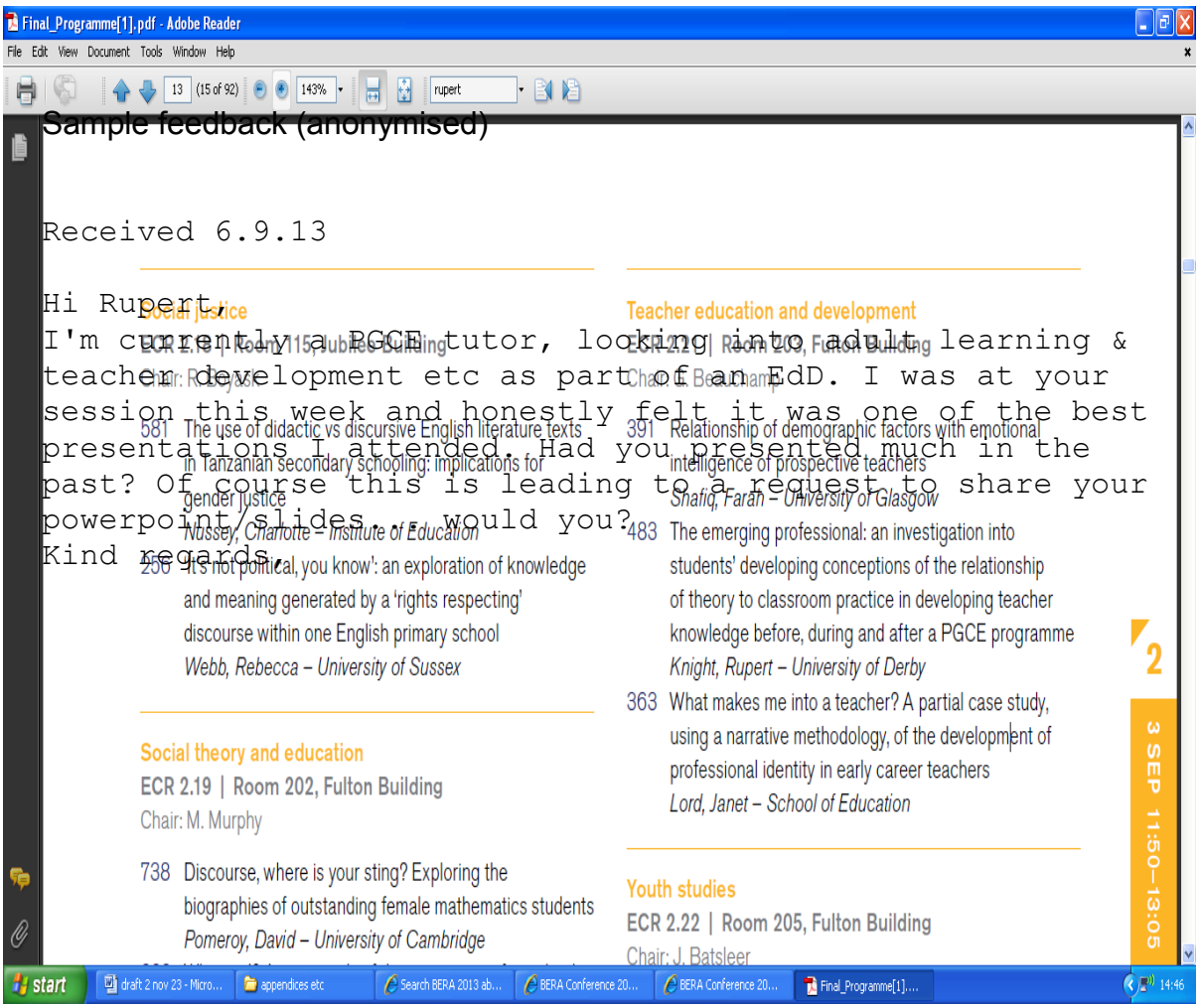
Appendix 7.3: Extract from BERA 2013 programme and feedback



Appendix 7.4: Abstract from first page of TEAN Journal article March 2013

'It's just a wait and see thing at the moment'. Students' preconceptions about the contribution of theory to classroom practice in learning to teach

Teacher Education
Network Journal

Vol 5 (1) page 45-59

Rupert Knight
University of Derby
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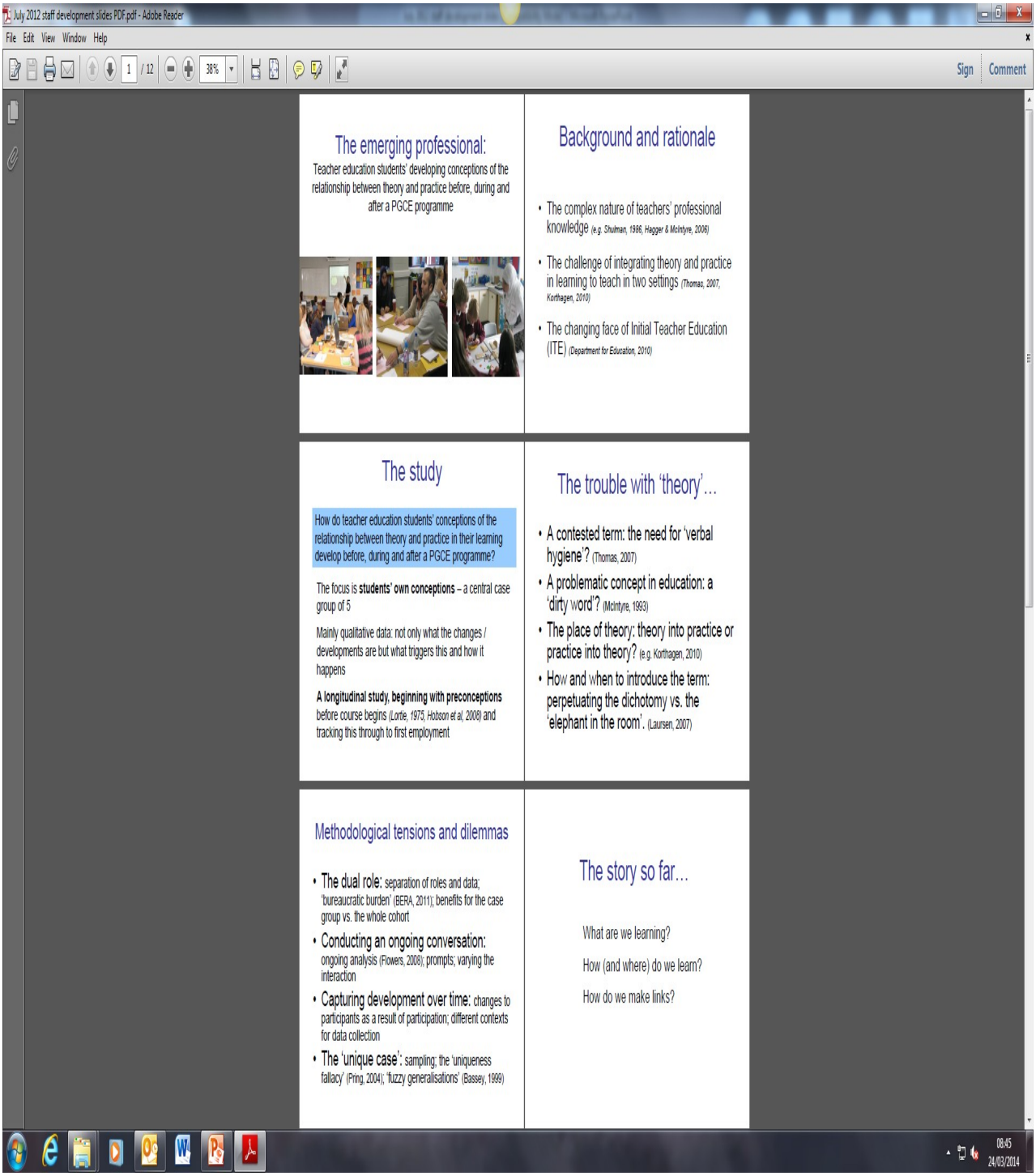
Abstract
This paper reports on an exploration of the preconceptions held by Primary PGCE students about the relationship of theory to classroom practice in learning to teach. Preconceptions about learning to teach have been found in the past to be unsophisticated and unhelpful, yet durable. Linking theory and practice within teacher education is notoriously difficult and studies report scepticism about the value of research findings and theory in everyday classroom practice. Furthermore, the nature of teachers' professional knowledge is itself uncertain and highly complex. Unlike many previous investigations into student teacher thinking, this small-scale case study captures participants' views before the start of their training and explores the research question through three key issues: what constitutes teacher knowledge, where this knowledge is learned and how these different facets of knowledge relate to one another. While many of the complexities of teaching are yet to be understood fully in this pre-course phase, these participants prove to be far from naïve and begin the course open to a range of forms of learning, with a positive view of the potential contribution of theory to practice. The insight into this starting point leads to some potentially important implications for future course design. The research relates to an English university, but the debate is significant to teacher education more widely.

Keywords
Preconceptions; theory; practice; knowledge; PGCE.

Appendix 7.5: Handout for university colleagues at team meeting July 2012



The emerging professional:

Teacher education students' developing conceptions of the relationship between theory and practice before, during and after a PGCE programme

Background and rationale

- The complex nature of teachers' professional knowledge *(e.g. Shulman, 1986, Hagger & McIntyre, 2006)*
- The challenge of integrating theory and practice in learning to teach in two settings *(Thomas, 2007, Korthagen, 2010)*
- The changing face of Initial Teacher Education (ITE) *(Department for Education, 2010)*

The study

How do teacher education students' conceptions of the relationship between theory and practice in their learning develop before, during and after a PGCE programme?

The focus is **students' own conceptions** – a central case group of 5

Mainly qualitative data: not only what the changes / developments are but what triggers this and how it happens

A longitudinal study, beginning with preconceptions before course begins *(Lortie, 1975, Hobson et al, 2006)* and tracking this through to first employment

The trouble with 'theory'...

- A contested term: the need for 'verbal hygiene'? (Thomas, 2007)
- A problematic concept in education: a 'dirty word'? (McIntyre, 1993)
- The place of theory: theory into practice or practice into theory? (e.g. Korthagen, 2010)
- How and when to introduce the term: perpetuating the dichotomy vs. the 'elephant in the room'. (Laursen, 2007)

Methodological tensions and dilemmas

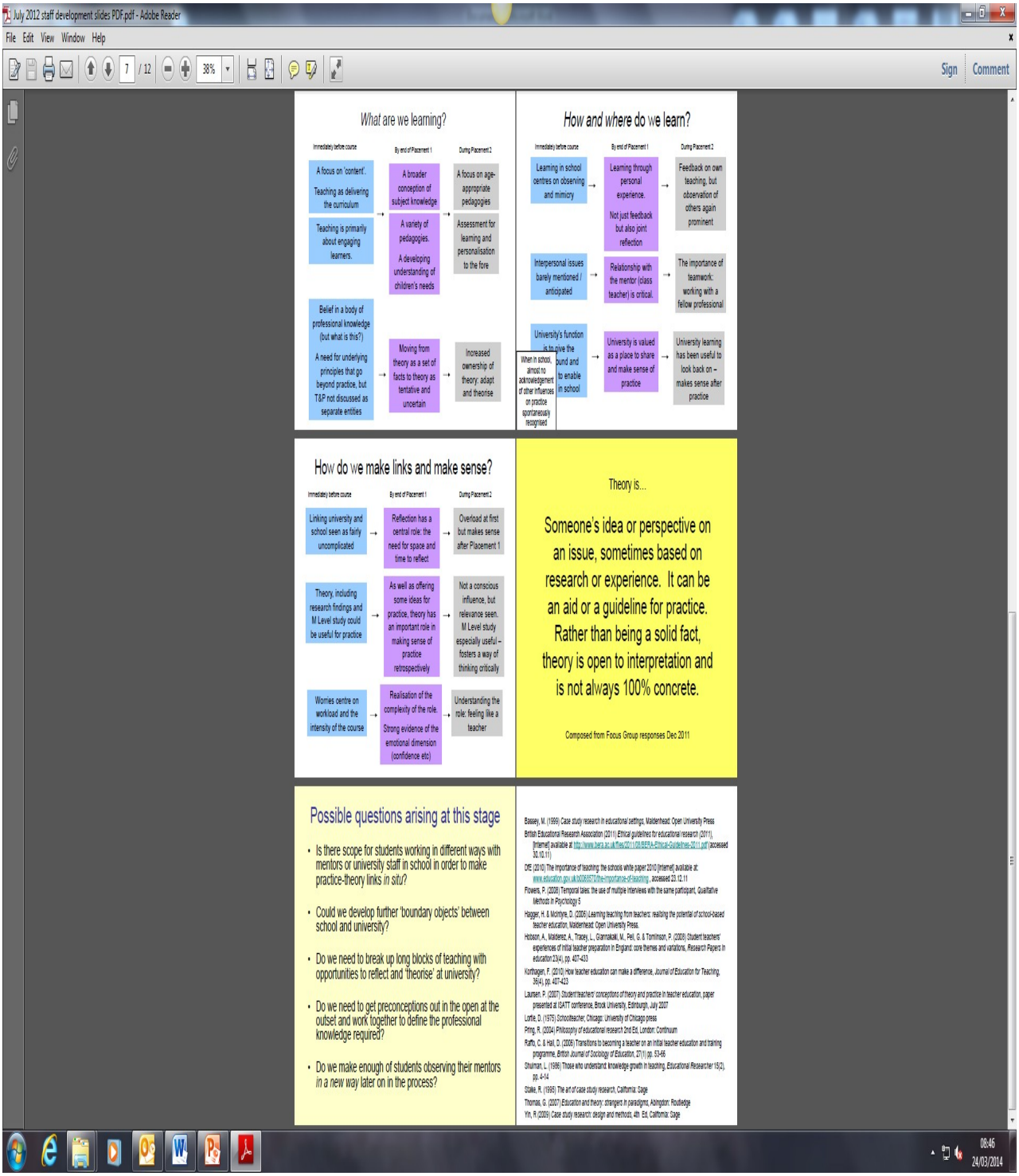
- **The dual role:** separation of roles and data; 'bureaucratic burden' (BERA, 2011); benefits for the case group vs. the whole cohort
- **Conducting an ongoing conversation:** ongoing analysis (Flowers, 2008); prompts; varying the interaction
- **Capturing development over time:** changes to participants as a result of participation; different contexts for data collection
- **The 'unique case':** sampling; the 'uniqueness fallacy' (Pring, 2004); 'fuzzy generalisations' (Bassey, 1999)

The story so far...

What are we learning?

How (and where) do we learn?

How do we make links?


July 2012 staff development slides PDF.pdf - Adobe Reader
File Edit View Window Help
Sign Comment
What are we learning?
Immediately before course
By end of Placement 1
During Placement 2
A focus on 'content'.
Teaching as delivering the curriculum
A broader conception of subject knowledge
A focus on age-appropriate pedagogies
Teaching is primarily about engaging learners.
A variety of pedagogies.
A developing understanding of children's needs
Assessment for learning and personalisation to the fore
Belief in a body of professional knowledge (but what is this?)
A need for underlying principles that go beyond practice, but T&P not discussed as separate entities
Moving from theory as a set of facts to theory as tentative and uncertain
Increased ownership of theory: adapt and theorise
How and where do we learn?
Immediately before course
By end of Placement 1
During Placement 2
Learning in school centres on observing and mimicry
Learning through personal experience.
Not just feedback but also joint reflection
Feedback on own teaching, but observation of others again prominent
Interpersonal issues barely mentioned / anticipated
Relationship with the mentor (class teacher) is critical.
The importance of teamwork: working with a fellow professional
University's function is to give the ground and to enable in school
University is valued as a place to share and make sense of practice
University learning has been useful to look back on – makes sense after practice
When in school, almost no acknowledgement of other influences on practice spontaneously recognised
How do we make links and make sense?
Immediately before course
By end of Placement 1
During Placement 2
Linking university and school seen as fairly uncomplicated
Reflection has a central role: the need for space and time to reflect
Overload at first but makes sense after Placement 1
Theory, including research findings and M Level study could be useful for practice
As well as offering some ideas for practice, theory has an important role in making sense of practice retrospectively
Not a conscious influence, but relevance seen. M Level study especially useful – fosters a way of thinking critically
Worries centre on workload and the intensity of the course
Realisation of the complexity of the role.
Strong evidence of the emotional dimension (confidence etc)
Understanding the role: feeling like a teacher
Theory is...
Someone's idea or perspective on an issue, sometimes based on research or experience. It can be an aid or a guideline for practice. Rather than being a solid fact, theory is open to interpretation and is not always 100% concrete.
Composed from Focus Group responses Dec 2011
Possible questions arising at this stage
Is there scope for students working in different ways with mentors or university staff in school in order to make practice-theory links in situ?
Could we develop further 'boundary objects' between school and university?
Do we need to break up long blocks of teaching with opportunities to reflect and 'theorise' at university?
Do we need to get preconceptions out in the open at the outset and work together to define the professional knowledge required?
Do we make enough of students observing their mentors in a new way later on in the process?
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